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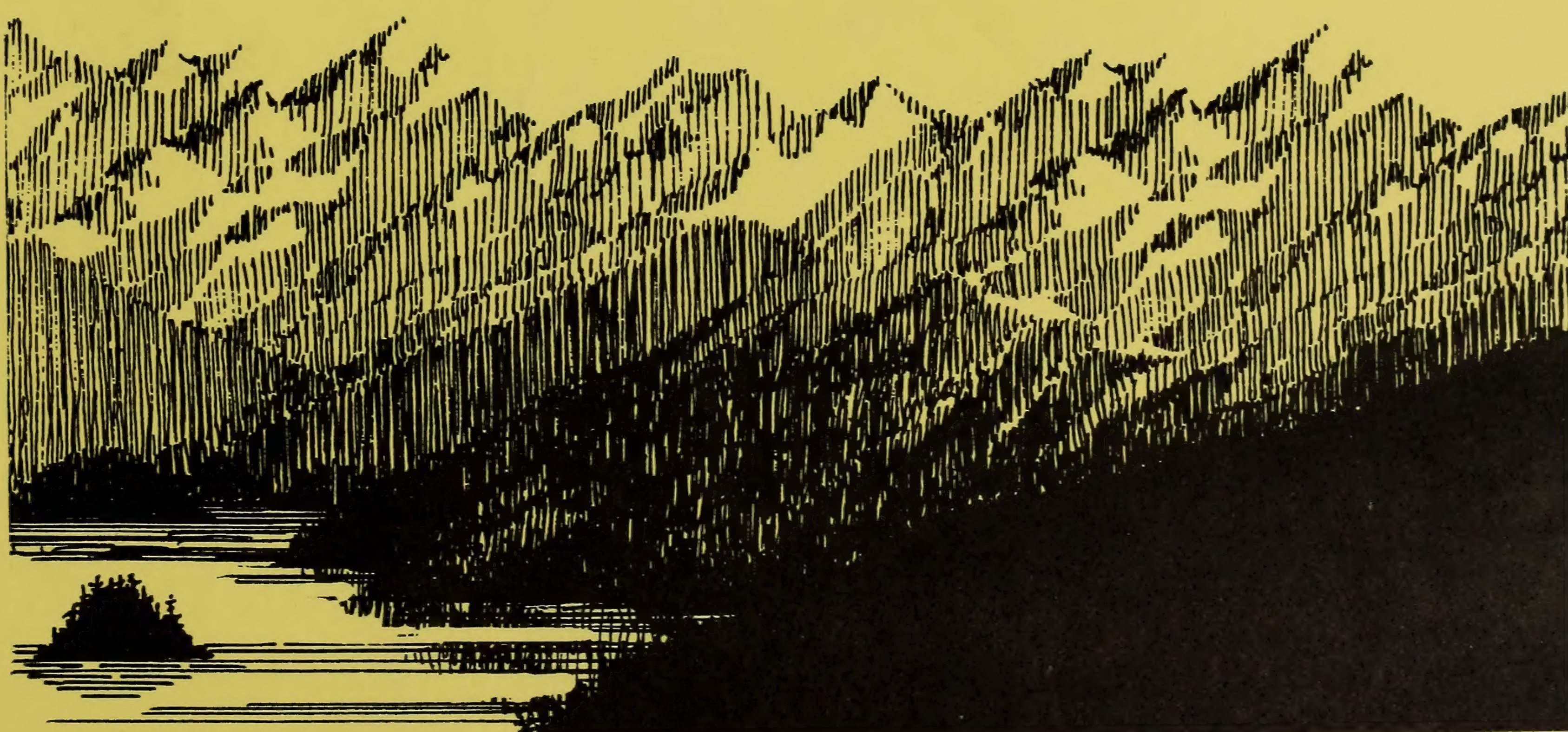
Tongass Land Management Plan Revision

Supplement to the Draft Environmental Impact Statement

Appendix, Volume I



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Appendix A

Issue Identification

APPENDIX A

ISSUE IDENTIFICATION AND PUBLIC COMMENT ON THE DEIS

INTRODUCTION

This appendix is in two parts. The first part, Issue Identification, discusses the identification of the public issues used during the planning (revision) process, and describes each original issue in detail. This part is unchanged from the DEIS. The second part, Public Comments on the DEIS, includes a summary of all comments received during the comment period (July 25, 1990 to January 3, 1991) for the 1990 draft environmental impact statement. Chapter 1 of the Supplement briefly explains the relationship of the public comments to each issue. Although information from these comments was used in developing the Supplement, no formal response to public comments is being made at this time. The final environmental impact statement will include responses to all public comments, those made on the DEIS and those made on the Supplement.

I. ISSUE IDENTIFICATION

IDENTIFYING ISSUES

In late 1987, over 4,000 copies of preliminary issues defined by the Forest Service were distributed to those expressing an interest in management of the Tongass. The preliminary issues were developed after reviewing what people had said during previous planning efforts. Also, over 22,000 homes and businesses received the preliminary issues as an insert in seven Southeastern newspapers. Following distribution of these issues, workshops were held in 33 Southeast Alaska communities to review and discuss the revision process and the proposed issues. To get as many people involved as possible, news releases were aired on radio and television and notices were posted throughout communities and published in local newspapers.

Early in 1988, over 600 letters arrived at the forest planning office, with comments on the original list of issues. These letters were from individuals, business people, representatives of special interest groups, and officials holding positions in either State or community governments. The great majority of responses came from individuals and organizations within Southeast Alaska (Table 1). A wide spectrum of viewpoints representing every level of interest was received. Each letter was read, and comments were coded by subject, then entered into a computerized database. As specific responses were reviewed, it became clear that the public was most concerned with two major types of issues: 1) land allocation issues and 2) community lifestyles, stability and jobs issues.

TABLE 1
NUMBER OF INDIVIDUAL RESPONDENTS BY COMMUNITY

Community	Number of Respondents	Community	Number of Respondents
Angoon	4	Klawock	3
Auke Bay	2	Meyers Chuck	5
Coffman Cove	10	Pelican	43
Craig	6	Petersburg	52
Douglas	8	Point Baker	6
Elfin Cove	4	Port Alexander	2
Edna Bay	5	Rowan Bay	1
Gustavus	30	Sitka	67
Haines	15	Skagway	2
Hobart Bay	1	Tenakee Springs	5
Hollis	1	Thorne Bay	4
Hoonah	122	Tokeen	1
Hydaburg	2	Ward Cove	1
Hyder	2	Wrangell	26
Juneau	52	Yakutat	4
Kasaan	1	Other Alaska	13
Ketchikan	84	Lower 48	38
Subtotal	346	Subtotal	276
	Total	622	

RELATIONSHIP OF IDENTIFIED ISSUES TO THE TONGASS LAND MANAGEMENT PLAN

In the 1979 Tongass Land Management Plan, eight issues were identified and addressed: land allocation, community lifestyles, community stability and jobs, wilderness preservation, Admiralty Island, fish and wildlife, aquaculture, and minerals. With the exception of Admiralty Island and aquaculture, issues identified in 1979 continue today. Of particular concern now, as then, are the amount and location of land allocated to scenic and recreation values, fish and wildlife habitat, timber harvesting, mineral exploration and development, and wilderness. In addition, there continues to be concern about maintaining lifestyles, community stability, and jobs.

DISCUSSION OF SELECTED ISSUES

The major issues are presented below in the form of questions. An overview of each issue is presented, followed by a description of the interrelationship of the issue with other resource issues and by indicators of responsiveness to the issues. The degree to which issues can be resolved is limited by the fact that

managing for some uses does not always complement other uses. There is not likely to be one management approach that is fully responsive to all issues.

ISSUE

WHAT AREAS ON THE TONGASS NATIONAL FOREST SHOULD BE MANAGED TO EMPHASIZE SCENIC RESOURCES?

The Tongass National Forest is a unique combination of land and marine environments. The Forest includes a narrow mainland strip and over one thousand offshore islands. Together the islands and mainland provide nearly 11,000 miles of meandering shoreline, interspersed with numerous bays. The mainland and islands are mountainous, often abruptly rising from sea level to elevations of 3,000 feet and more. Beyond the mountains on the mainland, huge ice fields produce glaciers easily viewed from the waterways. World-class scenery, resulting from the unique interaction of mountain and ocean environments, draws thousands of visitors each year. These visitors view Southeast Alaska from cruiseships or ferries traveling the popular Inside Passage water route. Tourism has become a major industry in Southeast Alaska, similar to timber harvest and commercial fishing in terms of the number of people directly employed. Tourism has helped diversify economies of some communities. Maintaining the scenic quality of the Forest landscape is of concern to Forest visitors, individuals, groups, businesses, and communities.

The majority of individual respondents from several Southeast Alaska communities want to see more emphasis placed on managing for scenic resources. These communities include: Angoon, Auke Bay, Craig, Douglas, Edna Bay, Gustavus, Haines, Juneau, Klawock, Pelican, Petersburg, Point Baker, Sitka, Tenakee Springs, Thorne Bay, and Wrangell. The majority of respondents from the Lower 48 also want more emphasis placed on managing for scenic resources. Several cities and organizations expressed similar interest in managing the Tongass to emphasize natural scenic quality. These include: Alaska Discovery, City and Borough of Sitka, City of Tenakee Springs, City of Yakutat, Hollis Community Council, Inc., Juneau Area State Parks/Advisory Board, Juneau Audubon Society, Narrows Conservation Coalition, Sierra Club, Southeast Alaska Conservation Council, and Yakutat Fishermen's Association.

Individuals and organizational representatives want scenic screens along Alaska Marine Highway routes, roads, and streams; and around their communities. They stress maintaining scenic quality in these areas because of the importance of tourism, recreation and aesthetics. They are concerned that timber harvesting, roads and log transfer facilities will have a negative impact on tourism, recreation, and aesthetics associated with natural scenic quality.

The majority of respondents living in communities more dependent on timber harvesting, including Ketchikan, Craig, Hobart Bay, Hoonah and Wrangell, want

to continue to be able to harvest timber along Alaska Marine Highway routes, roads, and streams; and around their communities. The Ketchikan Chamber of Commerce and the City of Wrangell recommend that some of the areas be cut progressively at a moderate rate rather than heavily at a rapid rate to maintain scenic quality and to display a multiple-use forest. They are concerned that allocating land along ferry routes to maintain natural scenic quality will cause reductions in the annual timber harvest.

Individual respondents from Coffman Cove and Skagway and from organizations including Alaska Loggers Association, Inc., and Snow Mountain Pine Company suggest that the Forest be managed for both scenic quality and timber harvesting.

Opinion regarding management for scenic quality was split in the communities of Sitka and Wrangell with half of the respondents wanting more emphasis on scenic quality; half wanting the Forest to be managed for both scenic quality and timber harvesting. Respondents from Thorne Bay were split with half wanting more emphasis on scenic quality; half wanting less emphasis. Half of Hobart Bay respondents want present emphasis on scenic quality to continue, while half want less. Respondents from Hoonah were split three ways in their opinion of emphasizing scenic quality with some wanting more, others wanting less, and still others wanting current scenic quality to be maintained.

ISSUE

WHAT AREAS SHOULD BE MANAGED TO EMPHASIZE RECREATION OPPORTUNITIES?

Dense spruce and hemlock rain forests, active glaciers, salmon, whales, eagles, bears, and miles of protected waterway, combined with the vast size and remote character of the Forest, provide a truly unique natural setting. For the most part, roads and trails are few and are concentrated around communities. Outdoor recreation opportunities offered by the Tongass National Forest play an important role in the quality of life for the majority of Southeast Alaska residents. Many families have favorite places where they fish, hunt, beachcomb, hike, or just go to get away. Visitors and residents alike recognize the unique recreation experience afforded by lack of roads and necessity for boat access.

The majority of individuals responding from Angoon, Auke Bay, Craig, Douglas, Gustavus, Juneau, Klawock, Pelican, Petersburg, Point Baker, Skagway, Tenakee Springs, Thorne Bay, and Wrangell want to see more emphasis placed on managing for recreation. Likewise, the majority of respondents from the Lower 48 want additional emphasis placed on managing for recreation. Cities and organizations wanting more emphasis placed on managing for recreation include: Alaska Discovery, City of Tenakee Springs, City of Yakutat, Haida Corporation, Hollis Community Council, Inc., Hyder Community Assoc., Inc., Island

Riders Association, Juneau Area State Parks/Advisory Board, Juneau Audubon Society, Ketchikan Area State Pards Advisory Board, Northwest Rivers Council, Sierra Club, Sitka Advisory Committee, Sitka State Parks Advisory Board, Southeast Alaska Conservation Council, State Parks and Outdoor Recreation and the Wildlife Society.

These individuals and organizations are concerned about what might happen to recreation places as a result of other resource management activities. Many point out that timber harvesting, roading, and other by-products of logging, and mineral exploration and development, can result in unwelcome changes in scenery, solitude and traffic patterns. These groups emphasize the need for undeveloped recreation areas, additional trails, and cabins.

Hyder Community Association Inc., Ketchikan State Parks Advisory Board, Western Forests Industries Association, and Hull Cutting Company indicate that additional road access to recreation areas is important. They point out that roads built for logging are used extensively by recreationists. That being the case, the timber industry wants recreation to share road costs. Rather than undeveloped recreation areas, some communities, including Ketchikan and Wrangell, emphasize the need for developed sites to provide recreation for the many campers that travel by ferry.

The Alaska State Society of American Foresters, City of Wrangell - Economic Development Director and the FMC Gold Company want a mix of management emphasis placed on recreation and other Forest uses including timber harvesting and mining. Yakutat Fisherman's Association wants current management emphasis on recreation to continue.

Opinion was split between individual respondents in the communities of Coffman Cove, Edna Bay, Haines, and Hoonah. About half want more emphasis on recreation, and half are satisfied with the current mix of emphases. Likewise, respondents from Hobart Bay were split. About half want more emphasis on recreation, while half want less. The majority of respondents from Sitka requested that less emphasis be placed on managing for recreation, while Ketchikan respondents are satisfied with the current management emphasis.

ISSUE

WHAT METHODS SHOULD BE USED TO PROTECT RESIDENT AND ANADROMOUS FISH HABITAT?

The fisheries resource on the Tongass contributes significantly to the economic, recreational, and subsistence needs of residents and non-residents alike. Most of the salmon caught in the waters of Southeast Alaska and in the Gulf of Alaska, originate in streams and lakes lying within the boundaries of the Tongass National Forest. Streamside habitat provides important shelter, hiding

places, food, and rearing areas for Alaska's salmon. Changes in streamside habitat can alter a stream's ability to produce fish.

Fish resources have a large economic impact throughout Southeast. The majority of respondents from Angoon, Craig, Douglas, Edna Bay, Gustavus, Haines, Hoonah, Juneau, Ketchikan, Pelican, Petersburg, Point Baker, Port Alexander, Tenakee Springs, Thorne Bay, and Wrangell believe the value of these fisheries is greater than the value of timber production. They believe fish habitat should always be given preference over timber harvest and related activities. They recommend that streamside zones be established to protect resident and anadromous fish streams and riparian areas. Those responding from the Lower 48 want additional emphasis put on managing the Forest for fish. Cities and organizations holding similar views include: City and Borough of Sitka, City of Port Alexander, City of Tenakee Springs, City of Yakutat, Friends of Berners Bay, Haida Corporation, Hollis Community Council, Inc., Hyder Community Assoc, Inc., Juneau Audubon Society, Narrows Conservation Coalition, Sitka Advisory Committee, Southeast Alaska Conservation Council, State of Alaska - Office of the Governor, Sumner Strait Fish and Game Advisory Committee, USDI Fish and Wildlife Service, Wildlife Society, and Yakutat Fish and Game Advisory Committee.

Coffman Cove, Hobart Bay, and Hydaburg respondents believe the current mix of management for fish and timber harvesting is sufficient, as does the City of Wrangell - Economic Development Director, and Hull Cutting Co. Organizations requesting a mix of management on fish and other Forest resources include: Alaska Loggers Association, Inc., Alaska State Senate, Alaska State Society of American Foresters, FMC Gold Company, Koncor Forest Products Co., and Western Forest Industries Association.

Timber interests, including Whitestone Logging, and Snow Mountain Pine Company, point out that there is little scientific evidence supporting the benefit of streamside zones to fish habitat. They believe that streamside zones are extremely susceptible to blowdown. They also point out that as timber harvesting has continued, salmon harvests have been rising dramatically in the last ten years.

Those responding from Sitka and Skagway are split with about half wanting more emphasis on fish and half wanting the same management emphases mix.

ISSUE

WHAT AMOUNT OF OLD-GROWTH AND UNDEVELOPED HABITAT SHOULD BE MANAGED FOR THE PROTECTION OF WILDLIFE?

The Tongass National Forest supports a wide variety of wildlife species, including the largest populations of brown bears and breeding bald eagles in the

world. The Tongass is also somewhat unique with the abundance of marine mammals and seabird colonies. Many species, which are endangered elsewhere in the United States, are abundant on the Tongass. Alaskans and visitors find sport and subsistence hunting of moose, brown and black bears, mountain goat, and deer. Many species of furbearers, waterfowl, upland game birds, and small game also provide the public with sport, commercial, and subsistence use opportunities. Demand is also growing for opportunities to watch and photograph wildlife.

Many wildlife species abound on the Forest, using its old-growth forests for food and cover. The majority of respondents from a number of communities including, Angoon, Craig, Douglas, Edna Bay, Gustavus, Haines, Hoonah, Juneau, Ketchikan, Klawock, Pelican, Petersburg, Point Baker, Port Alexander, Tenakee Springs, Thorne Bay, and Wrangell are concerned that logging, and other development of natural resources in these old-growth stands, has a detrimental effect on the habitat available for wildlife species. This, in turn, decreases the availability of these resources for human use. Individuals from these communities recommend that old-growth habitat, especially that near communities, be allocated to protect sport, commercial, and subsistence wildlife uses. The majority of respondents from the Lower 48 also want old growth managed for wildlife rather than for timber harvesting.

In addition to individuals, a number of cities and organizations want management to emphasize wildlife. These include: City and Borough of Sitka, City of Port Alexander, City of Tenakee Springs, City of Yakutat, Friends of Berners Bay, Hyder Community Assoc., Inc., Juneau Audubon Society, Narrows Conservation Coalition, National Marine Fisheries Service, National Wildlife Federation, Sierra Club, Southeast Alaska Conservation Council, State of Alaska - Office of the Governor, Sumner Strait Fish and Game Advisory Committee, USDI - Fish and Wildlife Service, Wildlife Society - Alaska Chapter, Yakutat Fish and Game Advisory Committee and Yakutat Fishermen's Association.

Respondents from Coffman Cove, Hobart Bay, Hydaburg, and Sitka think that current management emphasizing wildlife and timber harvesting is adequate. Organizations with similar views include: Alaska Loggers Association, Inc., Alaska State Senate, Alaska State Society of American Foresters, Koncor Forest Products, Hull Cutting Co., and Ketchikan Chamber of Commerce They believe that well-managed logging projects provide human access to wildlife and can improve wildlife habitat. They are concerned that allocating old-growth areas to protect wildlife will result in reductions in the annual timber harvest.

Respondents from Skagway were split in their opinions. Half want more emphasis on managing for wildlife while half prefer a mix of emphases.

ISSUE

WHAT SHOULD THE FOREST SERVICE DO TO CONTINUE PROVIDING SUBSISTENCE OPPORTUNITIES?

For some people, subsistence is hunting, fishing, trapping and gathering natural resources to provide needed food which is supplemental to their income. For others, especially Southeast Alaska's Native Americans, subsistence is much more than collecting food: it is a lifestyle that preserves cultural customs and traditions, reflecting deeply-held attitudes, values, and beliefs. Because both commercial fishing and timber harvesting employment opportunities are seasonal and cyclical, subsistence use of resources is important to many Southeast Alaskans.

Individual respondents from Angoon, Douglas, Edna Bay, Gustavus, Haines, Juneau, Pelican, Point Baker, Port Alexander, and Tenakee Springs want management for subsistence to be emphasized. Cities and organizations sharing this viewpoint include: City of Port Alexander, City of Tenakee Springs, City of Yakutat, Haida Corporation, Hoonah City Council, Klawock Cooperative Association, Narrows Conservation Coalition, Sitka Advisory Committee, Sumner Strait Fish and Game Advisory Committee, and Yakutat Fish and Game Advisory Committee. These groups are concerned that timber harvesting and its associated development activities adversely affect habitat critical to important fish, wildlife, and other subsistence resources. The most-mentioned concern was that road use by non-local people results in competition with rural residents for Forest resources. The result could be a decline in numbers of local subsistence species and more restrictive hunting regulations. To maintain subsistence opportunities, these organizations and individuals recommend that old-growth habitat be retained around communities.

Other individual respondents from Coffman Cove, Hobart Bay, Ketchikan, and Thorne Bay and organizations including: Hollis Community Council, Inc., Ketchikan Chamber of Commerce, Koncor Forest Products Co., and Yakutat Fishermen's Association think that current management emphasis on subsistence is adequate. Some believe that timber harvest and road construction have a positive effect on subsistence opportunities. They think that deer and bear make considerable use of clearcuts, that opening up the forest provides additional sources of food for subsistence species, and that roads increase hunter access to these species. They do not think that maintaining old growth around communities is necessary to ensure subsistence opportunities.

Half of those responding from Craig and Petersburg want more emphasis on subsistence while half want less emphasis. Respondents from both Sitka and Wrangell are split three ways in their opinion about how to manage for subsistence. Some want more emphasis, some want less, and a third group is satisfied with existing management.

ISSUE

WHAT AREAS OF THE TONGASS SHOULD BE MANAGED TO EMPHASIZE TIMBER HARVESTING?

In the 1950's, Congress began encouraging establishment of an Alaskan timber processing industry to promote stable year-round employment. To make this proposal economically attractive to the timber industry, long-term timber sale contracts were established. Today, only two of these contracts are still in effect. Congress assured a supply of timber to the purchasers of these contracts and to independent contractors when it passed the Alaska National Interest Lands Conservation Act (ANILCA) in 1980. ANILCA provided for the availability of 4.5 billion board feet of timber each decade from the Tongass National Forest. To reduce the cost of harvesting marginally economical timber and to offset the effects of designating approximately 5.4 million acres of Wilderness elsewhere on the Tongass, ANILCA also resulted in establishment of the Tongass Timber Supply Fund (TTSF) .

Public opinion is sharply divided on whether or not the long-term contracts, the current timber sale program of 4.5 billion board feet per decade, and the TTSF should be maintained. The majority of individual respondents from Coffman Cove, Hobart Bay, Hoonah, Hydaburg, Ketchikan, Petersburg, and Skagway want the current timber sale program to continue with a mix of management emphases to include other resources. Cities and organizations that want the current timber sale program to continue include: Alaska Loggers Association Inc., City and Borough of Sitka, City of Wrangell - Economic Development Director, Herring Bay Lumber Co., Hoonah City Council, Hull Cutting Co., Ketchikan Chamber of Commerce, Koncor Forest Products Co., Snow Mountain Pine Company, and Western Forest Industry Association.

These individuals and groups believe the Forest Service has an obligation to maintain local and regional economies by continuing the long-term timber sale contracts and the annual timber sales program. They feel that a steady, predictable, long-term timber supply should be assured so that industry can plan its investment strategy. They argue that, in depressed markets, the Forest Service should reduce the costs of timber harvest by maintaining the TTSF and by providing timber sales that are more economically feasible. They feel that a significant amount of the high-value timber stands were removed from timber production by being designated Wilderness through ANILCA. These people believe the TTSF was created by Congress to offset the loss created by Wilderness and National Monument designations and that Congress should fulfill its commitment.

The majority of respondents from Angoon, Auke Bay, Craig, Douglas, Elfin Cove, Gustavus, Kasaan, Klawock, Pelican, Point Baker, Tenakee Springs, and the Lower 48 want the 4.5 billion board feet per decade timber sale program reduced. Cities and organizations sharing this viewpoint include: Alaska Dis-

covery, City of Pelican, City of Port Alexander, City of Tenakee Springs, City of Yakutat, Haida Corporation, Hollis Community Council, Inc., Klawock Cooperative Association, Narrows Conservation Coalition, Sierra Club, Sitka Advisory Committee, Southeast Alaska Conservation Council, Sumner Strait Fish and Game Advisory Committee, The Mountaineers, The Wildlife Society, Wilderness Society, and Yakutat Fishermen's Association.

These organizations believe the long-term contracts should be terminated, that 4.5 billion board feet of timber each decade is more than the Forest is capable of producing, and that the TTSF should not be used to support below-cost timber sales. They believe the large companies dominate the timber sales program and unfairly compete with small companies who purchase short-term sales. They are concerned that long-term contracts are not flexible enough to address other resource issues or changes in management emphasis. They want to see more emphasis on non-commodity resources than what is given in the current plan.

A number of communities are split in their opinions of managing the Forest to emphasize timber harvest. Half of the respondents want the same mix of emphases. The other half including, Edna Bay, Haines, Juneau, Sitka, Thorne Bay, Wrangell and Yakutat, want less timber harvest.

ISSUE

WHAT ROAD SYSTEM SHOULD BE DEVELOPED ON THE TONGASS NATIONAL FOREST?

The transportation system in Southeast Alaska evolved almost entirely to access logging sites. Today, some of the Forest roads linking island communities have been upgraded and incorporated into the State Highway System; a trend that is expected to continue in the future. In some areas, such as Prince of Wales Island, transportation networks have been developed between some log transfer facilities and existing communities.

The majority of individual respondents from some communities, including, Angoon, Edna Bay, Gustavus, Haines, Ketchikan, Point Baker, Tenakee Springs, Thorne Bay, and from the Lower 48 do not want additional roads, additional log transfer facilities, nor do they want to be connected to other existing roads. They believe that roads and transfer facilities destroy the scenic landscape and the unique characteristics of Southeast Alaska's undeveloped areas. They also believe that access results in concentrated use of and increased competition for fish, wildlife and recreation resources.

Cities and organizations sharing this opinion include: City of Pelican, City of Port Alexander, City of Tenakee Springs, City of Yakutat, Haida Corporation, Sumner Strait Fish and Game Advisory Committee, Yakutat Fish and Game Advisory

Committee, and Yakutat Fishermen's Association. City of Yakutat, and Sumner Strait Fish and Game Advisory Committee recommended that some roads be closed following timber harvesting activities. In addition, Yakutat is opposed to having the community connected to Canada by road.

The majority of respondents from other communities, including, Auke Bay, Coffman Cove, Hoonah, Hyder, Juneau, and Sitka, favor additional roads, additional transfer facilities, and encourage connecting existing roads. They point to the need for additional public access for subsistence and recreation use, and to the increased economic opportunities that roads provide. They believe that roads should remain open following timber harvest activities to provide additional access. They want road alternatives considered that connect Southeast Alaska to Canada. Organizations supporting this opinion include: Alaska Loggers Association, Inc., Alaska State Senate, AMEX Mineral Resources Company, City and Borough of Sitka, City of Wrangell - Economic Development Director, City of Wrangell - Mayor, Ketchikan Area State Parks Advisory Board, Ketchikan Chamber of Commerce, Koncor Forest Products Co., State of Alaska - Office of the Governor, United 4-Wheel Drive Associations, and Whitestone Logging, Inc.

Respondents from Hydaburg, Meyers Chuck, and Port Alexander favor existing road management. Half of respondents from Wrangell want more, while half want less. Respondents from Douglas, Pelican and Petersburg are split between reducing emphasis on road development, and mixing road development with other Forest uses.

ISSUE

WHAT AREAS AND ACCESSABILITY SHOULD BE EMPHASIZED FOR EXPLORATION, DEVELOPMENT, AND PRODUCTION OF MINERAL AND ENERGY RESOURCES?

The Tongass National Forest contains immense mineral resources. Minerals that occur on the Forest range from precious metals to chemical grade minerals. Mining and mineral exploration are not new to Southeast Alaska. In fact, mining activities have occurred for over one hundred years. Juneau, the state capitol, was founded on gold discoveries. Today, along with new explorations, many historical mineral deposits are being revisited. This renewed interest in mining could, directly or indirectly, employ many people in Southeast Alaska.

The majority of individuals responding from Edna Bay, Point Baker, and Wrangell are opposed to emphasizing access for mineral and energy exploration and development. The City of Pelican, City of Port Alexander, City of Tenakee Springs, City of Yakutat, Sumner Strait Fish and Game Advisory Committee, and Yakutat Fishermen's Association are also opposed to emphasizing mineral exploration and development on the Tongass. These individuals and

groups believe that mineral resource development will adversely affect other resources, and think that mitigation requirements, established to minimize impacts, do not take place or are not adequately documented. Many suggest that mineral development be discouraged or prohibited in prime fish and wildlife habitat and in Wilderness because they feel protection of fish, wildlife, and Wilderness resources are always more important than mineral resources.

The majority of respondents from Juneau, Hyder, Kasaan, Sitka, and the Lower 48 support more emphasis on access for mineral exploration and development. Organizations sharing this opinion include: AMEX Mineral Resources Company, City and Borough of Sitka, Greens Creek Mining Company, and USDI Bureau of Mines. Some of these groups and individuals believe the Forest Service does not consider mineral resources equally with other resources in the planning process and that direction is overly restrictive--emphasizing surface resource use and protection, over mineral resource availability and use. This inequity, they suggest, does not truly manifest the multiple-use concept. Some companies commented that their industry requires long-term financial commitments, and that the land base of the Tongass National Forest was too volatile and unstable to invest in mineral exploration and development activities.

Those responding from Craig, Gustavus, Hobart Bay, Hydaburg, Pelican, and other Alaskan communities favor maintaining current management emphasis for mineral exploration and development, and a mix with other Forest uses. Supporting this opinion are Alaska Loggers Association, Inc., Alaska State Senate, City of Wrangell - Economic Development Director, FMC Gold Company, Ketchikan Chamber of Commerce, Koncor Forest Products Co., and the State of Alaska - Office of the Governor.

Respondents from Coffman Cove, Douglas and Petersburg are split three ways in their opinions. Some want more emphasis, others want less, and still others want a mix. Also split in their opinion are respondents from Hoonah. Some are satisfied with current emphasis on minerals, while others want more emphasis. Ketchikan, Port Alexander and other Alaska communities are also split with about half wanting more emphasis and half wanting a mix.

ISSUE

WHAT AREAS AND WHAT AMOUNT OF ROADLESS LANDS SHOULD BE RECOMMENDED FOR WILDERNESS DESIGNATION AND WHAT KINDS OF USES SHOULD BE PERMITTED?

One of the major issues identified in the 1979 Tongass Land Management Plan related to how much land and which areas should be formally designated as Wilderness. Some organizations promoting Wilderness designation considered Alaska to be the Nation's last opportunity to preserve large tracts of lands that were relatively untouched by human activity. To these organizations, formal

Congressional designation was seen as the only long-term guarantee that there would be no future major development in these areas. Stressing Alaska's storehouse of minerals and timber, others felt that resource development should be permitted and that Wilderness designation would only 'lock-up' valuable resource development opportunities. Although approximately 5.5 million acres were added to the National Wilderness Preservation System on the Tongass in 1980, the amount and location of Wilderness continues to be an issue. (Update: This led to passage of the Tongass Timber Reform Act, which designated an additional 299,696 acres of Wilderness in the Tongass.)

The majority of individual respondents from Auke Bay, Craig, Douglas, Gustavus, Point Baker, Skagway, Tenakee Springs, Wrangell, and the Lower 48 want additional areas designated as Wilderness. Cities and organizations sharing this position include: City and Borough of Sitka, City of Pelican, City of Tenakee Springs, Klawock Cooperative Association, National Wildlife Federation, Southeast Alaska Conservation Council, Sumner Strait Fish and Game Advisory Committee, Wildlife Society - Alaska Chapter, and Yakutat Fishermen's Association. They want additional areas designated as Wilderness to protect these areas from timber harvest, more roads, and mineral development. They also want motorized access and fish enhancement in Wilderness.

The majority of individual respondents from Ketchikan, Sitka and other Alaska communities want less Wilderness while individuals from Coffman Cove, Hobart Bay, Hoonah, Hydaburg, Klawock, Petersburg, and Thorne Bay want the same amount of Wilderness currently designated.

Opinion was split in the communities of Edna Bay and Haines with about half of the respondents wanting more Wilderness designated and half wanting that currently designated. Likewise, Juneau was split with some wanting more, some less, and some the same.

Other cities and organizations believe there is enough Wilderness and do not want additional areas designated; but, they also want access and use limited in current Wilderness areas to retain pristine characteristics. These include: the City of Wrangell - Economic Development Director, Hollis Community Council, Inc., and the Narrows Conservation Coalition.

Several cities and organizations want fewer areas designated as Wilderness than currently exists. These include: Alaska Loggers Association, Inc. (Update: now Alaska Forest Association), Alaska Miner's Association, Alaska State Senate, AMEX Mineral Resources Company, City and Borough of Sitka, FMC Gold Company, Greens Creek Mining Company, Hull Cutting Company, Ketchikan Chamber of Commerce, Koncor Forest Products Company, Snow Mountain Pine Company, United 4-Wheel Drive Associations, and Whitestone Logging, Inc.

Ketchikan State Parks Advisory Board, City and Borough of Sitka, Whitestone Logging, and the Alaska Loggers Association (now Alaska Forest Association) recommend that portions of existing Wilderness be made available for timber harvest in exchange for other wilderness-like areas.

ISSUE

WHAT WAYS SHOULD NATIONAL FOREST LANDS BE MANAGED TO PROVIDE FOR THE LOCAL LIFESTYLES OF SOUTHEAST ALASKA COMMUNITIES?

Employment and income generated by the government sector, timber, fishing, mining, and tourism industries is critical to the social and economic well-being of existing and emerging Southeast Alaska communities. Some individuals also rely on subsistence use of Forest resources to provide needed food which is supplemental to their income. In some situations, a positive increase in the development of one industry or lifestyle may negatively affect another.

Dependency on the land and natural resources as part of one's livelihood is an economic fact of life throughout much of Southeast Alaska. Because of this dependency, management of the Tongass National Forest has been, and continues to be, closely tied to the issue of regional and community socioeconomic development and structure. Minor changes in Forest programs can sometimes cause major changes in community lifestyles.

Early efforts by the Forest Service to establish a timber processing industry in Southeast Alaska were viewed as a means of promoting stable year-round employment. Since that time however, State land selections authorized by the Alaska Statehood Act of 1959 have resulted in the emergence of numerous remote communities throughout Alaska. The stability and structure of some of these communities is directly influenced by Forest management activities while other communities are not as directly dependent or affected by such activities. Differences in objectives and perceived needs can result in disagreements between some communities and the Forest Service.

As might be expected, views on this issue are divided. The majority of individual respondents from Hoonah and Sitka support emphasizing timber and mining. Several cities and organizations also emphasize development; these include: AMEX Mineral Resources Company, City and Borough of Sitka, Greens Creek Mining Company, Ketchikan Chamber of Commerce, Koncor Forest Products Co., and Whitestone Logging, Inc.

These groups and individuals believe that employment and income generated by the timber and mining industry is critical to the social and economic development of Southeast Alaska. They think that a subsistence lifestyle is impossible without a stable economy based on timber. Several people mentioned that

maintaining the present timber sale program of 4.5 billion board feet per decade is needed for community social and economic stability. Many communities believe the timber industry is the only option for employment other than fishing or welfare, and that fishing is not a lucrative business for most people. They think that the jobs provided by timber, both directly and indirectly, have a much higher wage rate than services and retail trade jobs provided by tourism. The latter are viewed as being seasonal jobs, whereas timber and mineral industry employees work year-round. This group did not see any conflicts between logging and mineral development, and the recreation industry. They stated that logging has not hurt wildlife or fish.

A second group of individual respondents from Angoon, Auke Bay, Craig, Douglas, Edna Bay, Gustavus, Pelican, Petersburg, and the Lower 48 want management to emphasize tourism, wildlife, recreation, and subsistence. Cities and organizations including: City of Port Alexander, City of Tenakee Springs, City of Yakutat, Haida Corporation, Hoonah City Council, Juneau Area State Parks/Advisory Board, Juneau Audubon Society, Ketchikan Area State Parks Advisory Board, Sitka State Parks Advisory Board, Sumner Strait Fish and Game Advisory Committee, national chapter of the Wildlife Society, and Yakutat Fishermen's Association support this viewpoint.

These groups and individuals believe there are areas of economic importance other than timber. They feel the economic and social future of Southeast Alaska depends upon the tourism, recreation, and fishing industries. Their opinion is that timber has only short-term social and economic benefits at the expense of long-term gains which can be provided by tourism, recreation, and fishing. They expressed a desire for the Forest Service to help communities switch from a timber economy to a tourist and fishing economy which was viewed as being more compatible with the subsistence lifestyles they wanted. Some communities have opted for tourism development rather than timber and feel the Forest Service should designate key areas for them for undisturbed recreation and subsistence. Their position is that individual communities should prescribe activities in their local area, rather than their being affected by towns dependent on timber.

A third group of individuals commented that a combination of timber, mining, and other commodity industries with tourism, recreation and fishing would be most desirable. Overall, they feel a balance should be sought between preservation and economic development. Individual respondents supporting this management emphasis were from Coffman Cove, Ketchikan, Klawock, Point Baker and Other Alaska communities. Organizations sharing this viewpoint include: Alaska State Senate, FMC Gold Company, Ketchikan Chamber of Commerce, Narrows Conservation Coalition, Snow Mountain Pine Company, State of Alaska - Office of the Governor, Sumner Strait Fish and Game Advisory Committee, and Western Forest Industries Association.

Respondents from Thorne Bay, Wrangell, and Yakutat were split equally with some wanting emphasis on recreation, tourism, and fishing; and others wanting a mix between these and commodity industries. Juneau residents were split between emphasizing timber harvesting, mining, and a mix between these and amenity industries.

II. PUBLIC COMMENTS ON THE DEIS

PUBLIC HEARINGS

A total of 398 persons presented testimony at the 35 hearings held throughout Southeast Alaska between September 8 and October 16, 1990. The great majority of comments can be divided into three major categories: environmental concerns, support for the timber program, and subsistence (separate from being mentioned with other environmental concerns). This summary is divided into these categories.

Environmental Concerns

Approximately 60 percent of all hearing commenters fell into this category. About 1/2 of those stated their opposition to the preferred alternative, while others gave ideas or concerns not specifically related to an alternative. The major comments on the preferred alternative were:

- the preferred alternative is biased towards timber, gives priority to timber harvest over other resources, or has too much timber harvest,
- the high levels of timber harvest will cause adverse effects to fish and wildlife (stream effects, old growth habitat, winter habitat), tourism and recreation (scenic quality, recreation settings), and subsistence,
- old growth is not a renewable resource and is being depleted too rapidly; the high-grading of high-volume old growth should not continue,
- the preferred is based on bad data, faulty assumptions, poor or suspect analysis (especially the fish effects), and a lack of site-specific information,
- the preferred is not responsive to the needs or desires of communities, and ignores the input they've already provided.

Many people supported the Southeast Alaska Conservation Council (SEACC) position, the HR 987 areas, and the National Marine Fisheries Service (NMFS) riparian standards. About 10 percent of environmental commenters supported Alternative A (some "grudgingly"), but most were more concerned with opposing the preferred and/or supporting HR 987.

Many of the "environmental" comments addressed harvest in specific areas adjacent to or important to communities (see individual community summaries).

The areas most often mentioned for no or limited harvest (besides the HR 987 areas) were: the Cleveland Penninsula, Icy Straits, north Chichagof Island, north Prince of Wales Island, Kuiu Island, and places near Petersburg.

Several persons noted the absence of "new perspectives" ideas or emphasis in the preferred (or any alternative), and would like to see a final Forest Plan that uses new forestry techniques, other methods than clearcutting, and a more holistic approach to forest management.

Timber Program Support

Those supporting timber harvest (about 1/2 in conjunction with support for Alternative D) made up about 30 percent of all commenters. Their main ideas were:

- the timber industry is an important segment of Southeast Alaska's economy; many communities could not survive without the base of timber employment,
- timber is a renewable resource, abundant on the Tongass N.F., and should be used,
- we can have high levels of timber harvest and at the same time meet other resource needs and protect the environment,
- a high level of harvest is needed to make up for Native lands decreases, meet demand, and supply the small mills,
- only 10 percent of the Tongass is open to logging; enough areas are set aside for other uses (especially Wilderness),
- the rural Alaska lifestyle is important to us; we need to keep our jobs,
- roads built for timber sales provide important access to recreation places, and for fishing, hunting and other uses: they should be kept open.

A number of people, not just "timber supporters," would like to see more emphasis given to the smaller, locally-owned mills, to small sales, to locally-processed timber products, and to thinning and salvage.

Subsistence

Subsistence was the main topic of representatives of the Native community, and separate from being lumped with other environmental concerns, received about seven percent of the comments. The main ideas expressed were:

- concern over the effects of timber harvest on subsistence, including:
    - logging near streams and bays is detrimental to salmon production and thus subsistence use: it should not be allowed near important subsistence bays,
    - timber harvest should be reduced or limited, or should not occur at all,

- concern over roads and roaded access: subsistence effects of greater competition, fewer animals available (although a few commenters, not from the Native community, liked roaded access for subsistence uses),
- subsistence as important for supplementing incomes,
- concern for maintaining the traditional Native Alaskan lifestyle: with the idea that subsistence is much more than just getting food,
- some wanted us to more actively manage for subsistence, others to let the Natives define and manage subsistence,
- subsistence use must to be carefully evaluated before doing any logging in any specific area.

Security Bay, other bays of north Kuiu Island, and Sea Otter Sound were specific areas mentioned as important to subsistence users. Two persons spoke about the need of Native artists for forest products (such as for totem poles and canoes), and of recognizing that need in our planning.

WRITTEN COMMENTS

Letters on the Tongass Plan Revision came from 3,365 individuals, organizations, interest groups, Native Alaskan representatives, agencies and local governments (not counting multiple signatures). This summary of written comments is divided into four parts: letters with common themes, alternative preferences, site-specific comments, and comments by resource and issue.

Letters With Common Themes

1. Environmental Concerns/Amenity Interests

About 970 letters were received from the lower 48 (widely dispersed), all with the same general theme and comments (though with many individual variations) and which appear to have been inspired by an article in The National Wildlife Federation Digest ("Trouble in Tongass"), and by a Wilderness Society publication. The main ideas expressed were:

- I am against your preferred alternative, which gives priority to timber harvest,
- you should be managing for maximum protection of wilderness, wildlife and fish habitat, and recreation areas (or, I would support an alternative that does this),

- we should not be clearcutting our forests,
- you should be following a conservation (or multi-use) strategy,
- we need to protect/preserve the little old growth that remains,
- you're out of touch with what Americans want,
- your revision is based on totally inaccurate data,
- besides the Wilderness areas in HR 987, special protection should be given to Honker Divide, Mansfield Peninsula, Salmon Bay Lake and Mt. Edgecumbe.

About 360 persons responded to a Southeast Alaska Conservation Council (SEACC) "Alert" (which came out about December 1), or in a few cases to previous SEACC material. After mentioning passage of the Tongass Timber Reform Act, the alert says there's still lots to be done: "Please write a letter to the Forest Service TODAY! Here are the key points to include:" - and goes on to list them. Most respondents have included several-to-all of these points, some only one or two, and a few have just sent in the alert and added their signature. The "key points" were:

- reject the June "preferred alternative" (which gives priority to logging and ignores Congressional intent),
- implement "the letter and the intent" of the Tongass Timber Reform Act, and prepare a new "preferred" that "embraces" the new Act,
- correct the innaccurate timber database ("that undermines the validity of the entire plan"),
- give the strongest protection possible to:
    - areas in HR 987 left out of the new Act,
    - key tributaries of Salmon Bay Lake,
    - Honker Divide Canoe Route and adjacent lands,
    - the entire Mansfield Peninsula,
    - Mt. Edgecumbe,
    - River Corridors with outstanding features,
    - other key areas (important to the respondent),
- defer timber harvest on the Cleveland Peninsula for 10-15 years,
- disclose the ten year logging and road-building schedule.

A variation of the above SEACC Alert was distributed through Sierra Club publications, to which about 80 individuals responded. The main difference is the addition of a request to withdraw the Minerals Prescription, as being inappropriate, unnecessary and environmentally unsound.

A separate request to withdraw the Minerals Prescription has also been received from another 44 individuals from the Juneau area. Besides the same general concerns over the prescription, there is also specific local concern that the Juneau area would be better served by a recreation emphasis than a mining emphasis, and that "the minerals prescription would have devastating conse-

quences on recreation if applied to the Juneau area" (Juneau Audubon "Action Alert"). Many persons mentioned specific recreation places that they feel would be affected.

Another group of letters (200 received), mainly from the lower-48, give support for Alternative A. These appear to be inspired by an Audubon Society article. About 30 are in form-letter form. The main ideas expressed were:

- I oppose the preferred alternative (as too slanted towards timber),
- I support Alternative A, it has the strongest protection for fish and wildlife habitats and recreation opportunities,
- you should not be clearcutting in the best wildlife habitat areas.

Another 45 letters expressing very general conservation/preservation themes without the above specifics have been received.

A petition signed by "over 850 students at Rutgers University and citizens of the surrounding towns" (so says the cover letter - we haven't counted them), while not directly addressing the Tongass, is concerned with ending below-cost timber sales (as environmentally and economically unsound) and the logging of virgin old growth. It says the Forest Service should be subsidizing recycling, not timber harvesting.

A petition from Boston College (218 signatures) supports HR 987 and the protection of key wildlife areas from logging.

A form letter/petition in the form of a questionnaire concerning subsistence use areas has come from Angoon (five letters with a total of 48 signatures). It lists 14 specific areas, then has several statements to "agree/disagree" with (all respondents agreed). The main ideas were:

- I would NOT like to see any INCREASED development in these areas like logging activities, road building and mining,
- mining activities have NOT proven safe for our environment,
- logging causes turbidity; logging activity is detrimental to fish,
- I do not want any decisions made on subsistence or subsistence use areas until agreement can be reached on how to define "customary and traditional use" and "alternative resources."

2. Timber Harvest Support/Commodity Interests

About 420 letters were received from "logging communities and camps" (as self-identified in the letters - Cube Cove, Coffman Cove, Ward Cove, Hoonah, Sitka, Ketchikan, Lab Bay, Rowan Bay, Thorne Bay, Naukati, Metlakatla, Wrangell and others), all personal letters ranging from one sentence ("I WANT

LOGGING") to two pages. Many are from spouses and children. Most of the letters repeat the same general points and concerns, one or more to a letter. Only a few make reference to an alternative. One was signed by 66 individuals from Cube Cove. Corner Bay School sent eight drawings of forest scenes with harvested areas, seedlings, deer, etc. The most common ideas expressed were:

- I am opposed to any reductions in logging,
- keep the harvest level at 450 million or higher (many suggest 500-600 million; a few say that 420 is too low),
- we want/need no more wilderness (1/3 of the forest is enough),
- we need to maintain lifestyles and communities: loggers contribute to the local communities (most mention how long the writer has lived in Alaska; some mention the safer, healthier living and better values in their communities than in those they had come from in the lower 48),
- don't put my dad out of work,
- many see the preferred alternative (as they understand it, that is - it would add more Wilderness and lower the harvest level) as a threat to their continued way of live in Alaska,
- several say they like to hunt and/or fish, and want access to these activities to remain open.

A form letter (184 received) supporting timber harvest, with associated ideas, in the form of a questionnaire, came from Alaska and the lower-48 (but mainly Southeast Alaska). It was developed and distributed by the Alaska Forest Association (formerly Alaska Loggers Association). Many came from businesses. An opening statement addressed to the Regional Forester closes with: "I ask that you prepare a final alternative that will provide for a timber base to maintain a healthy timber industry." The respondent is asked to select a harvest level (from four options: most commonly selected are "421-550 mmbf" or "over 550 mmbf"), and then agree or disagree with several statements. While a few respondents disagreed with one or more of the statements, most agreed with all statements. Some added comments of their own. The main ideas of the statements were:

- the amount of old growth projected to be retained under the alternatives is enough,
- I favor mining and mineral development,
- I favor allowing transportation/utility corridors and developed recreation,

- I support public access and expansion of roads in timber harvest areas,
- I oppose any more Wilderness in the Tongass,
- I oppose the recommendation of Wild & Scenic Rivers.

A variation of the previous questionnaire (84 received) came from Sitka (also a few from Wrangell). Instead of the selection of a harvest level, there is a statement about timber jobs, and a choice of the amount of land to be "set aside for timber production" to either maintain, increase or decrease jobs. There is also a statement asking that the preferred alternative be reconsidered "so that there are no cumulative effects that derail our region's major industries and the communities that depend on them." While a few respondents disagreed with one or more of the statements, most agreed with all statements. Some added comments of their own.

Another variation of the questionnaire (see previous two paragraphs), with a mining industry emphasis, came mainly from other parts of Alaska (Anchorage, Fairbanks, Palmer, etc.) (316 received). It was developed and distributed by the Alaska Mining Association. While several of the statements are similar, the emphasis on timber is replaced by mining, and included were:

- I favor continued mining, mineral development and logging in the Tongass National Forest,
- I support giving all recognized mineralized tracts a minerals management prescription,
- I favor intensive study [by USBM and USGS] of the mineral potential of the Tongass and a more detailed evaluation of the potential negative effects that TLMP may have on mineral employment and on exploration and development expenditures.

While a few respondents disagreed with one or more of the statements, most agreed with all statements. Some added comments of their own.

A fourth questionnaire/form letter follows the general thrust of the previous three, with a combined timber-minerals emphasis. It was developed and distributed by the Resource Development Council for Alaska. About 343 of these were received. While a few respondents disagreed with one or more of the statements, most agreed with all statements. Some added comments of their own.

A form letter from Klawock Timber Alaska, Inc. (50 received) asks that no reductions in the ASQ come out of the independant (SBA set-aside) sale program, and asks that SBA timber sale amounts increase from 50% to 70% "as it is in the rest of the United States, and that all independant sales be SBA."

A form letter from Rowan Bay (APC return address) (60 received, in one of three formats) supports Alternative D, asks for no reductions in timber harvest, wants no more wilderness, and says timber is abundant and should be used.

Another 15 letters of a general nature support forest resource development.

Alternative Preferences

For those respondents who expressed a preference for an alternative (including the letters and form letters previously mentioned), the count is:

A - 264
B - 9
D - 81
E - 7
F1 - 8
C, E1, F, G, G1 and the "preferred" - less than five each

A mix of amenity values and resources were cited in support of Alternatives A, B and (sometimes) E, with recreation-related aspects, fish and wildlife habitat protection, and ecological concerns most mentioned. Several commenters liked the Wilderness recommendations of A and E. Other comments in support of A include: it best maintains the ecologic balance, it has the best harvest economics, it's the best for old growth, and it's best for the world ecosystem. A resolution by the Alaska Chapter of the American Society of Landscape Architects supports B, but with an ASQ of 300 mmbf and cancellation of the long-term contracts. Several commenters expressed opposition to clearcutting. A few respondents supported A "grudgingly" (they'd prefer less or no timber harvest, or a "new perspectives" alternative).

Maintaining the timber industry was cited in support of Alternatives C and F1, and commodity uses in general in support of D. A form letter (see above) is responsible for most of the Alternative D support. Alternative D is also being supported because it would offer more opportunities for the smaller timber companies in Southeast. Letters in favor of the preferred alternative, and alternatives E or E1 (sometimes), F or F1, and G or G1, see them generally as a good balance between preservation and resource uses. Many letters (as mentioned above) expressed opposition to the preferred alternative.

Site-Specific Comments

Note: Comments about areas that became Wilderness or Legislated LUD II as a result of the Tongass Timber Reform Act are not included, since the issue of their management has been settled by Congress. The majority of comments about these areas favored protective designations.

Approximately 1,400 letters (see "Letters With Common Themes" above) were received in response to several environmental group publications or articles. All of these sources listed specific areas for the public to include in their comments, and probably the majority of commenters did so. Many just asked for the "protection" of the areas, others asked that either the Primitive Recreation or Old Growth prescriptions be applied. These areas are:

- Mt. Edgecumbe (NRA proposal)
- the entire Mansfield Peninsula
- Salmon Bay Lake "key tributaries'
- Honker Divide canoe route and adjacent roadless lands
- Cleveland Peninsula (defer harvest for 10-15 years)
- HR 987 areas left out of the Tongass Timber Reform Act
- River corridors with outstanding natural beauty, high fisheries production, or unique ecologic characteristics (no specific ones listed)
- all Research Natural Areas (no specific ones listed)

A form letter from Angoon (discussed previously) listed 16 areas to be "identified and protected as subsistence areas," with no "increased" development (including logging, road building and mining). These areas are mainly specific bays and straits of Chichagof and Baranof Islands.

Following are the areas most commonly mentioned in the rest of the public comments, with a brief synopsis of comments about them. The areas are listed in approximate north-to-south order.

Sullivan Island - several requests for protection from logging, citing deer hunting (importance to Haines community), scenic quality (ferry and air routes) and recreation uses.

Juneau area - most Juneau-area comments opposed the application of the Minerals prescription in the area, citing the greater importance of scenic and recreation values. (This is discussed above under "Letters With Common Themes.") Several local conservation groups (Audubon, Sierra Club, Taku Conservation Society, SEACC) stated strongly similar concerns. Specific areas such as the Eagle and Herbert Glacier trails, to the entire area from Pt. Bishop to Berners Bay, were mentioned for withdrawal of the prescription.

Mansfield Peninsula - most commenters asked for non-logging prescriptions for Mansfield Peninsula, citing its importance for recreation and tourism (proximity to Juneau and being on the ferry route), scenic viewing, and as fish and wildlife habitat (deer and brown bear in particular). Residents of Funter Bay localized these concerns to their immediate vicinity.

Stephens Passage - commenters were concerned in general with the scenic qualities and recreation values of many locations along Stephens Passage. Areas mentioned for no logging included: Taku Inlet and the Taku River, Port Houghton, Windham Bay, the mouths of Tracy and Endicott Arms, and Port Snettisham. Unique wildlife and ecologic values were also cited for several of these areas.

Lisianski/Yakobi Island area - non-timber prescriptions were favored for this area, especially around Lisianski Inlet and River. Important subsistence values, wildlife habitat, fishing and recreation (including a kayak route), and scenic quality were reasons given.

Other Chichagof Island areas - many specific areas were identified (often by Tongass Plan Management Area or VCU) for non-timber prescriptions or simply for "protection." Recreation and subsistence values, wildlife habitat and scenic quality were mentioned as reasons for most of these. Some areas mentioned by name include: the Kadashan drainage, Sitkoh Bay, Tenakee Inlet, Goose Flats, Ushk Bay and Peril Straits (including Sitka State Parks Citizens Advisory Board). A minority of commenters asked for logging or road building in some of these same areas.

Baranof Island - most commenters cited different combinations of scenic, recreational, subsistence and wildlife values and uses in identifying areas of Baranof Island for protection or non-timber prescriptions. These areas included Kelp Bay and Catherine Islands (high subsistence values), Peril Straits (hunting, winter range), and Kalinin Bay, Dry Pass and Kruzof Island/Mt. Edgecumbe (scenic and recreation values).

The Sitka Conservation Society identified the Hoonah Sound to Sitka ferry route and adjacent areas as "the heart of Sitka's economy and lifestyle," asking that recreation prescriptions (Primitive or Semi-Primitive) be applied. The Sitka State Parks Citizens Advisory Board asked that Kruzof Island, Partofshikof Island, Olga and Neva Straits, the south half of Peril Straits, and "coastal areas 30 miles south of Sitka" be managed for their subsistence, scenic, recreation and wildlife values. A couple of commenters favored more roads in these areas.

Frederick Sound and Mainland Areas - scenic quality and recreation values were cited in support of non-timber prescriptions for Farragut, LeConte and Thomas Bays, Cape Fanshaw, and coastal areas in between. Thomas Bay received several comments, including a special area designation proposal. No logging was also requested for the smaller islands, including Turnabout.

Kupreanof Island - the Duncan Canal area received several comments requesting LUD-II-type prescriptions for specific areas along the canal (recreation and

roadless values). A few other areas were mentioned, with requests to protect wildlife, fisheries and old growth habitats.

Kuiu Island - Kuiu Island, including the Rocky Pass area, received the most comments of any area. Practically all the comments (including those from Sitka Conservation Society and Point Baker Community Council) were for protection (no logging) for specific portions of the island; the major concerns were for primitive recreation opportunities, scenic quality, subsistence uses, and fish and wildlife habitat. The Rocky Pass area, and several bays of East Kuiu, were noted for their recreation values, especially kayaking. All or portions of South Kuiu, and bays of West Kuiu (including Bay of Pillars), were noted for a combination of wildlife habitat, old growth, and recreation and scenic values. Bays of North Kuiu, especially Security Bay (many commenters, including the City of Kake), were cited as highly important subsistence areas where too much development has already occured. The Primitive Recreation and Old Growth prescriptions were most commonly requested (other than just "no logging").

Crystal Mountain/Blind Slough - several commenters requested non-timber prescriptions for these areas on Mitkoff Island. Natural values, scenic quality, and recreation and hunting were given as reasons. Two special area proposals for all or portions of the area were submitted.

Salmon Bay - several commenters (including Petersburg Fish and Game Advisory Committee, Narrows Conservation Coalition, and Salmon Bay Protective Association) asked for no logging or roading in the Salmon Bay watershed (beyond the area legislated as LUD II). Cited were the unstable soils and the concern for protecting important subsistence, fisheries and recreation values. One commenter asked for logging prescriptions for the areas outside the legislated LUD II portion.

Honker Divide - most commenters asked for protection from logging for the area's roadless recreation values and opportunities (including a popular canoe route); old growth and fisheries were also mentioned. The Tongass Conservation Society submitted a proposal for a "special management area" designation for the area. One commenter felt that logging should proceed in the area.

Hollis area - several Hollis residents and the Hollis Community Council submitted maps with proposed no-harvest areas in the Hollis vicinity. The importance of these areas to Hollis residents for subsistence, recreation, and domestic water were mentioned; also cited were fish and wildlife habitat values and tourism (scenic quality). Several commenters asked that Indian Creek near Hollis be managed for primitive recreation or as a natural area, and that it be protected from logging.

Hydaburg area - Haida Corporation has several concerns about Forest Service management in the Hydaburg area, the main idea being that areas important to Hydaburg and the Native community are not being recognized for their recreation and subsistence values. These include several islands which should be managed for scenic quality and recreation, other areas where non-intensive timber harvest may be o.k. (Sukkwan Island), and also the 11 "Haida traditional sites."

Other Prince of Wales Island areas - other comments pertaining to Prince of Wales Island included several Wild and Scenic River recommendations, a request to withdraw the Minerals prescription in specific areas, and a proposal for a "special caving region" in the El Capitan area. Many specific bays, sounds and islands were mentioned for non-timber management. A few commenters requested that the main Prince of Wales roads be kept open and maintained, both for community needs and to provide access to recreation opportunities. Nearby Dall Island received several comments asking for no logging on the west side of the island.

Cleveland Peninsula - most comments concerning the Cleveland Peninsula asked for either no future logging, a deferral of logging plans, or less intensive logging than planned. The main reasons given were the protection or retention of roadless recreation opportunities (hunting, fishing, scenic viewing) and wildlife habitat (old growth), and concerns from the Meyers Chuck community over water quality and development near them (no timber harvest or roads). Some felt that some timber harvest could occur as long as coastal areas and lakes were not disturbed. Others asked that logging go ahead on the Peninsula, with some feeling that a road system would benefit recreation there.

Revilla Island and Mainland Areas - several persons asked for the protection of roadless recreation values in the Orchard Lake area; others felt that a better road system on Revilla Island would benefit Ketchikan residents (recreation). The Hyder Fish and Game Advisory Committee asked for no more timber harvest or road construction in much of the Hyder area.

Comments by Resource and Issue

Note: This is a summary of comments from all letters not included in the "letters with common themes," "alternative preferences" or "site-specific comments". The comments are grouped by resource and/or issue. Comments from agencies, local governments, organizations and advisory boards are usually referenced as to the source.

Abbreviations and acronyms are used for some of the organizations and groups that are referenced frequently. These are:

AFA - Alaska Forest Association
AMA - Alaska Miners Association
FGB - Fish and Game Advisory Board
FGC - Southeast Regional Fish and Game Council
NMFS - National Marine Fisheries Service
RDC - Resource Development Council for Alaska
SEACC - Southeast Alaska Conservation Council
Sealaska - Sealaska Corporation
WS - Wildlife Society, Alaska Chapter

1. RECREATION and TOURISM

Analysis and Recreation Values - commenters were concerned that the different types of recreation (such as dispersed vs. developed) were not adequately distinguished, and that different kinds of recreation experiences (such as primitive vs. roaded) were given equal value. This in turn did not allow for an adequate analysis of effects. Commenters also felt that recreation demands were underestimated (SEACC, FGC, FGB).

Allocations and Prescriptions - most comments here were for application of recreation prescriptions, rather than the Minerals prescription, to the Juneau area (see Juneau Area comments under "site-specifc" comments). One commenter asked for a prescription to apply to "high-value recreation and tourism places."

Trails, Cabins & other Facilities - several commenters would like to see more emphasis put on developing and maintaining trails; a few asked for more cabins and developed campsites. A system of "tracks" (marked but undeveloped trails) was proposed, and also a system of "trails" that would include small craft and kayak harbors.

Motorized Uses - some commenters from Yakutat are concerned with the lack of a forest-wide off-road vehicle (ORV) plan, and with uncontrolled ORV use in their area. The Alaska Air Carriers Association is concerned with the "stricter and unnecessary regulations" for helicopters (vs. fixed-wing aircraft) in Wilderness.

2. SCENIC QUALITY

Most scenic quality comments were specific to a particular area (see "site-specific" comments). A few commenters (including the Alaska Visitors Association, which mentioned all "visual Sensitivity Level 1 areas") felt that the Alaska Marine Highway viewshed (or all Sensitivity Level 1 areas) deserves special

scenic management. One commenter did not think that managing for scenic quality outside of Wilderness was appropriate.

3. WILDLIFE and FISH (see also OLD GROWTH and DIVERSITY, and SUBSISTENCE)

Modeling and Analysis - commenters were concerned with the lack of data on animal population numbers, or incorrect hunting data. The fish modeling (effects of activities) was questioned by many (including NMFS, SEACC, FGC and several FGBs), as were the wildlife capability models (as unverified) (SEACC, FGC, several FGBs and WS). Many of the same commenters, and others, felt that more site-specific data was needed to be able to analyze effects on wildlife. Several felt that the modeling of effects as done could not be used to make decisions that might affect minimum viable populations.

Effects from Activities - the main concerns from commenters are the long-term effects to wildlife populations from continued roading and logging. The effects of access to habitat, as well as "removal" of habitat, need to be addressed, and the effects of mining and recreation on wildlife need to be evaluated (WS). The display of effects needs to be done by smaller areas to be understandable to forest users (Territorial Sportsmen, Inc.); this display should include 10-year harvest and road data, and also should break out separately effects to high-volume (class 7) old-growth habitat (SEACC, FGC, several FGBs).

Species and Habitat Protection - several commenters wanted to see specific objectives for wildlife habitat management and populations (SEACC, FGC, FGBs and Territorial Sportsmen) to assure the long-term productivity of wildlife and fish resources. Some felt we should be protecting entire drainages, not just streams, others that we should be managing for populations beyond minimum viable numbers ("healthy" populations, or numbers to meet public demand) (same references). A few commenters felt that enough habitat areas are already protected, and that there is wildlife value in second growth also.

Standards and Guidelines, Prescriptions - several commenters asked for stream buffers wider than the 100-foot requirement (ranging from 300 feet to 1000 feet), feeling that 100 feet was not enough to assure protection. One commenter (WS) did not feel that the standards and guidelines are rigorous enough to assure viability; others (SEACC, FGC and FGBs) that they need measurable objectives, and that additional standards and guidelines are needed.

4. OLD GROWTH and DIVERSITY (see also WILDLIFE and FISH, TIMBER MANAGEMENT)

Old Growth - commenters are in general concerned with the harvest of high-volume old growth, either at greater rates than other old growth, or at all. Wildlife habitat values are the main reason given for reducing the harvest of old growth (or the high-volume component), but also noted was its importance for biodiversity. Several commenters asked that the high-volume components (classes 6 and 7, or just 7) be displayed separately in the effects analysis; some would like to see a map showing the old growth. One commenter (RDC) feels that the old growth projected to remain by alternative is sufficient.

Diversity - a few comments were made on the inadequacy of the analysis of effects on diversity; one that to ensure biodiversity more watersheds should be removed from the timber base.

5. SUBSISTENCE (see also WILDLIFE and FISH)

Several commenters expressed general concern over the effects of timber harvest (loss or degradation of habitat) and roads (increased competition) on subsistence resources and uses. Some commenters (Sealaska, FGC and Sumner Strait FGB) felt that important subsistence use areas had not been identified or protected, and that this needs to be done. An adequate or meaningful analysis of subsistence effects is not possible until the key areas have been identified. To identify these, local recommendations need to be followed; also, TRUCS and other data should be used for effects analysis (Sumner Strait FGB) Several commenters questioned the accuracy of the subsistence data in the DEIS. Some commenters (including SEACC) felt that the Forest Service is not giving adequate recognition or priority to subsistence as a "legitimate and protected use of the resource" (Sealaska). The subsistence analysis needs to be redone "to provide a meaningful examination of significant restrictions on subsistence" (SEACC, FGC, several FGBs).

6. TIMBER MANAGEMENT (see also OLD GROWTH and DIVERSITY)

Inventory Data, Modeling and Analysis (see also ECONOMIC ANALYSIS) - more detailed timber harvest information, such as disclosure of the 10-year harvest plan (SEACC and others) with map locations, has been requested by several commenters; some also requested a map showing past harvest and the stage of regeneration of logged areas. One commenter (WS) asked for field validation of the timber inventory, separate tracking of timber volume class 7 stands, and a re-determination of economically suitable timberlands. Sealaska feels that timber availability is over-estimated: timber values are too high, and the costs aren't realistic. AFA commented that, in order to meet demand, the allowable sale quantity must be at least 565 mmbf: they'd like this reflected in the preferred alternative, and also feel an alternative with more timber acres than the

current is necessary to provide an adequate range. There were also a few comments on the determination or display of sustained yield.

Goals, Objectives and Policies - several commenters felt that more emphasis should be given to small timber operations, by allotting more of the overall sale volume to small sales and by promoting more local or U.S. uses of Tongass timber and of locally-manufactured timber products. Banning or limiting timber exports was a related idea. Other commenters fell that it is time for the Southeast Alaska timber industry to convert to a "second-growth industry." Local chambers of commerce (Haines and Ketchikan) are concerned that the stability and growth of the timber industry be encouraged, and that the smaller mills are allocated enough timber to remain in business.

Harvest Methods and Locations - the majority of commenters on this subject favored selection or partial cutting harvest methods over clearcutting. Some felt we had not adequately evaluated unevenage harvest systems; others that more selection harvest was needed to reduce adverse effects to watersheds. Several comments also suggested a reduction in roading by concentrating harvest in already-roaded areas, or by using more non-roading harvest methods.

New Perspectives/New Forestry (see also previous sub-section on harvest methods) - some commenters noted a lack of "New Perspectives" concepts or guidance in the DEIS, would like to see more emphasis on "new forestry" principles and methods (such as partial cutting).

7. MINERALS

The Minerals Prescription - practically all commenters on the proposed Minerals prescription expressed opposition to the idea, and particularly to its use in the Juneau area (see also site-specific comments). Some of the major reasons given are: it would not give adequate consideration of, or protection for, many other forest resources and uses; it is unnecessary and perhaps illegal, and would set a dangerous precedent nation-wide; the economic benefits of mining are short-term, of recreation and tourism long-term; environmental protection and mitigation costs should be borne by the developer, not the public; it does not allow project decisions to be made on a case-by-case basis, and; it will be strongly opposed by many local residents. (Commenters included: Juneau Group of the Sierra Club, SEACC, Taku Conservation Society, Alaskans for Juneau, Juneau Audubon Society and Sitka Conservation Society.)

Commenters favoring the Minerals prescription (including the American Mining Congress and AMA) see it as a good idea, but want it applied to more areas, and to include allowance for the "orderly development" of mineral resources wherever they occur.

Effects and Analysis - several commenters felt that the positive effects of minerals development were not adequately stated, nor were the effects of different alternatives on mineral development and employment adequately addressed. The advantages of mining the Tongass (access, revegetation potential) need to be identified (AMA), and a fuller discussion of undiscovered mineral resources is needed (US Geological Survey, RDC). A few commenters wanted more analysis of the effects of mining on other resources, including cumulative effects.

8. TRANSPORTATION

Roads - several commenters discussed the positive benefits of roads: access to recreation areas, better community services, and more opportunities for fishing and hunting. They felt that exisiting roads should not be closed. Maintaining and leaving open existing roads on Prince of Wales Island is a concern of many. Others felt that more roads should be closed, mentioning adverse effects to wildlife and increased competition for subsistence resources. A few commenters (Ketchikan Chamber of Commerce, Ketchikan Gateway Borough) would like to see consideration of transportation "infrastructures" during timber sale planning.

Borrow Pits - a few commenters voiced concern over the number of borrow pits on the Forest: they'd like to see fewer built, and existing pits reclaimed.

Transportation and Utility Corridors - several commenters (including Alliance for Juneaus's Future, Haines and Ketchikan Chambers of Commerce, American Mining Congress and AMA) are concerned that transportation and utility corridors be identified, and that future development options not be restricted. Several mentioned corridors linked to Canada.

9. WILDERNESS and WILD AND SCENIC RIVERS

Several commenters asked for no more Wilderness, and no Wild and Scenic Rivers, for the Tongass (AMA, AFA, RDC). Some felt that further Wilderness or Wild and Scenic River studies are precluded by ANILCA. American Rivers liked the Wild and Scenic Rivers analysis, but felt that a better suitability analysis is needed. A few recommendations for specific Wild and Scenic Rivers were received (see longer summaries of site-specific comments).

10. ECONOMIC ANALYSIS (see also RECREATION, TIMBER MANAGEMENT and MINERALS)

Modeling and Analysis, including Demand - several general but in-depth criticisms of the economic analysis in the DEIS were received (including NMFS and SEACC). Some found the projections of timber demand to be too high (Sealaska), others found it to be too low (AFA). Some felt that non-timber resources were not valued highly enough, or that demand for them was understated.

Employment Estimates - the main concern of commenters here was that the non-timber future employment estimates show no effects from the different alternatives (or from continued timber harvest at different rates), which they felt was unrealistic or in error. Recreation uses, tourism and fishing could all be affected differently under different harvest alternatives. One commenter felt that timber employment was overestimated.

Economic Effects (other than Employment) - some commenters (including Ketchikan Chamber of Commerce) stressed the overall positive benefits of the timber industry to local and regional economies. They want the plan to be sensitive to economic impacts and employment opportunities. Others felt that "subsidized" economic

Appendix B

Modeling and Analysis Process

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Introduction

Planning Situation

The National Forest Management Act of 1976 (NFMA) directs each National Forest to prepare a comprehensive land management plan. The Tongass National Forest produced it's first comprehensive Plan in April, 1979. The Act also directs that these management plans be revised at least every fifteen years. The Tongass began the Revision process in 1987, published a Draft Environmental Impact Statement (DEIS) in June, 1990 and prepared this Supplement to the DEIS as a result of the November, 1990, Tongass Timber Reform Act (TTRA).

The Forest's major planning goal under NFMA is to provide decisionmakers with sufficient information to determine the mxi of goods, services and land allocations which best resolves the identified public issues in a manner that maximizes net public benefits. Net public benefits are defined as the overall long-term value to the Nation of all outputs and positive effects (benefits), less all associated inputs and negative effects (costs), whether they can be quantitatively valued or not.

The regulations (36 CFR 219) developed under NFMA provide the current direction for an analytical framework for developing forest plans. The NFMA and its implementing regulations also provide that the requirements of the National Environmental Policy Act (NEPA) and its implementing regulations (40 CFR 1500-1508) are applicable to this analysis process. The NEPA regulations provide that environmental effects of a proposed action and alternatives to that proposed action must be disclosed.

The purpose of Appendix B is to present a technical discussion of the analysis process and models used in the Revision planning process. Due to the magnitude (17 million acre Forest) and complexity (23 land use designations proposed) of the planning process, a number of analytical models are used. This discussion includes basic assumptions, modeling components and inputs, rules, methods, and constraints. The information supplements the broader, less technical descriptions included in the body of Chapter 2 and 3 of the EIS. Additional information and documents used in the analysis process are contained in the planning record. The planning record in its entirety is incorporated here by reference.

Changes Between DEIS and Supplement

As a result of the 1990 Tongass Timber Reform Act land use designations, direction regarding timber demand, long term sale contract modifications and stream buffer requirements, all alternatives displayed in the June, 1990 DEIS changed. In addition, improvements to the electronic inventory (GIS), improvements in analytic techniques and constraints

analysis, and consideration of public comment received to date has led to measurable changes in the benefits, costs, level of goods and services, and land allocations associated with each of the alternatives.

Changes incorporated include:

Inventory and Data
- Timber inventory condition updated (for harvest)
- Wild, Scenic, and Recreation River information updated
- Inventoried Roadless areas updated
- New roads mapped
- Updated land ownership
- Updates made to incorporate TTRA land allocations, stream buffers and proportional timber harvest

Modeling Changes
- Analysis Area stratification (revised)
- Updated limited entry coefficients
- Re-calculated all timber values
- Disagregated high volume old growth (into Strata C and D)
- Wildlife model coefficients revised
- Eliminated allocation zones in FORPLAN
- Modeled fish, hunting, and recreation outside of FORPLAN
- Three FORPLAN Models, one for each Administrative Area, instead of one Forest-wide Model

Management Changes
- Land Use Designation options changed
- Long-term sales could be maintained in all alternatives
- Alternatives considered in detail changed to reflect TTRA and improved inventory information

The Planning Process

The planning process described in the NFMA implementing regulations consists of ten steps oriented towards a systematic analysis of the complex issues associated with multiple-use forest management. This 10-step process is discussed in Chapter I of the Supplement and is briefly summarized as follows:

1. Identification of purpose and need: Issues, Concerns, and Opportunities - In any systematic approach to problem solving, the first step is to identify the problem. In this step, the interdisciplinary team (IDT) assesses what's changed in terms of the public issues, management concerns, and resource use and development opportunities since the Plan was initially developed and since the subsequent amendments.

2. Planning Criteria - Criteria are designed to guide the collection and use of inventory data and information, the analysis of the management situation and the design, formulation, and evaluation of alternatives. This step sets the guidelines for accomplishing the next five steps.

3. Inventory data and information collection - The type of data and information needed is determined in step 2 based on the issues, concerns, and opportunities identified and the resultant assessment of the management situation and determination of what needs to change.

4. Analysis of the management situation - This step is a redetermination of the ability of the planning area to supply goods and services in response to recognized changes in society's demands. This provides the basis for the formulating the appropriate range of reasonable alternatives.

5. Formulation of Alternatives - A reasonable range of alternatives is formulated according to NEPA procedures. Alternatives are formulated to assist in identifying one that comes nearest to maximizing net public benefits.

6. Estimated effects of alternatives - The physical, biological, economic and social effects of implementing each alternative are considered in detail to respond to the issues and need for change.

7. Evaluation of alternatives - Significant physical, biological, economic and social effects of implementing alternatives are evaluated with respect to the planning criteria.

8. Preferred alternative - The three Forest Supervisor's review the IDT's evaluation of each alternative and recommend a preferred alternative to the Regional Forester. The Regional Forester then either selects the Forest Supervisor's recommendation or develops some other mix of alternatives as the proposed action. This alternative is described as Alternative P in the Supplement and is displayed as the Proposed Revised Forest Plan.

9. Plan approval and implementation - The Regional Forester reviews and approves the Revised Forest Plan and Final Environmental Impact Statement

10. Monitoring and evaluation - The Plan establishes a system of measuring on a sample basis actual activities and their effects and compares these results with projections contained in the Proposed Revised Forest Plan. Monitoring and evaluation comprise an essential feedback mechanism to ensure the Plan is dynamic and responsive to change.

Inventory Data and Information Collection

Overview

The inventory step of the planning process consists of the collection, development, and documentation of data needed to address the public issues, management concerns and resource opportunities and planning criteria identified in Planning steps 1 and 2. Two basic types of information are needed to facilitate the analysis and development of alternatives. The first consist of information related to the classification of land into catagories with unique properties. This classification can be based on any attribute significant to planning issues. This type of information is tied directly to the map base. In the case of the Tongass National Forest, this map base is its GIS data base.

The second type of information is not directly tied to a map base but has more to do with the estimation of how land will respond to certain management activities. This type of information comes from many sources: Regional procedural handbooks, professional research studies, Master's thesis', etc. The most up-to-date and verifiable information was utilized for the Supplement.

Database Development

In 1986, a computerized Geographic Information System (GIS) was instituted for the Tongass National Forest Plan Revision. A GIS links natural resource data with spatial (map) information. This linkage enables valuable spatial analysis and rapid display of resource information for forest plannning.

Automating the Tongass's 17 million acres has been a major effort. The data base is among the largest natural resource GIS data base in the United States; requiring 14,000 megabytes of storage for the basic inventories. These inventories included approximately 893,988 20-acre points, each containing information related to 39 different types of data. Inventories are continually updated to reflect current conditions and verification of existing information is an on-going effort.

Major Uses of Inventory Data

Analysis Areas. The basic resource information and boundaries contained in the data layers of the mapping system are used to define the areas which are analyzed in the planning process. Analysis areas represent the aggregation of many individual areas which have the same characteristics and similar responses to management activities. FORPLAN is then used to assign prescriptions and schedule activities to these homogenous areas. The

analysis area formulation process is described, in detail, in the Forest Planning Model section of this appendix.

Production coefficients. Inventory data was combined with other analytical models to develop production values (outputs) expected from various land units. The incorporation of Habitat Capability Models (HCM) with the inventory data base, enabled planners to estimate past, present, and future wildlife capacity figures.

Alternative Development and Analysis. Alternatives were developed to meet specific resource objectives or follow a particular theme. The use of inventory data allows accurate reflection of the land base and provides the basis for scheduling activities and outputs. The forest's data base was used to identify those areas in need of special consideration (e.g., high-hazard soils) as alternatives were be developed. This process is discussed further in the Formulation of Alternatives section of this appendix.

Implementation and Monitoring. Inventory data will continue to be essential when the Revised Plan moves into the implementation phase. The inventory will aid in the implemention of site specific projects identified in the forest-wide plan. Also, the inventory will continue to be updated as new information is obtained through monitoring. Data obtained from the evaluation of site-specific activities will be incorporated into the data base for future estimates and plannning analysis.

Summary of Major Data Sources

The major data sources used in the planning process are the Geographical Information System (GIS) data base and studies conducted to determine output values and cost coefficients.

Geographical Information System Data Layers. Thirty-nine different physical, biological, or administrative layers of resource related information are contained in polygonal form in the Geographic Information System (4 gigabytes). These layers formed the basis for the resource data used for programmatic analysis. The data layers include:

1) Cultural Sites
2) Aspect
3) Slope
4) Elevation
5) Soils
6) Each Long Term Contract Sale Boundary
7) Existing Eagle Nests buffered 330 feet
8) The TLMP 141 Management Areas as modified by TTRA
9) Lakes
10) Land Status
11) Minerals (known and inferred)
12) Primary Base Series Shoreline

13) Each of the 228 USGS Quadrangles
14) Existing Recreation Places
15) Existing Recreation Sites
16) Roadless Areas
17) Existing Roads
18) Potential future arterial road and power transmission corridors
19) Cliffs
20) Special Uses
21) Streams by each of nine process groups and three stream classes
22) Subsistence Ever Hunted Deer
23) Timber type map
24) Administrative sites
25) Structures
26) Tour ship and ferry routes
27) Trails
28) 867 Value Comparison Units
29) Visual Resource inventory
30) Each watershed
31) Wildlife Habitat
32) Research Natural Areas
33) Special Interest Areas
34) Estuaries
35) Riparian
36) Managed Timber Stands
37) Tentatively Suitable Forest Lands
38) Eligible Wild, Scenic, and Recreation Rivers
39) Wildlife Analysis Areas

For a detailed report on the source and date of these layers, consult the Resources Information Management Data Dictionary, USFS, Region 10, June, 1991.

Coefficient Development and Estimation of Effects. The GIS enables identification and stratification of land into logical groupings. The response of these groups to management activities was determined from a wide variety of existing data. All coefficients and assumptions made in the modeling process have been developed from the following information sources.

1) Codes and definitions for many of the activities, outputs, and effects come directly from the National Activity Structure Handbook (FSH 1309.16).

2) Timber values were determined using timber appraisal summaries for Southeast Alaska. The mid-market timber values where calculated using the quarterly Cut and Sold Reports for the Tongass, 1979-90.

3) The costs attributed to harvesting timber have been calculated using actual cost expenditure reports averaged for several years by geographical area.

4) Old Growth timber yields are based on the timber type map and standing volume re-inventory

5) Yields for regenerated second growth timber stands were derived from permanent study plots and the SEAPROG yield table generation program.

6) Average percent utility volume and defect by Administrative Area was determined from the Timber Sale Statement of Accounts reports.

7) Recreation values where calculated based on a Travel Cost study conducted by Data Decisions Group, Inc. and the Southeast Alaska Marketing Council, 1988.

8) The costs of providing and maintaining recreation opportunities on the Forest have been calculated using actual Forest Service cost information.

9) Recreation capacity figures were estimated by each administrative area using the procedures outlined in the Recreation Opportunity Spectrum Users Guide (ROS) (Forest Service Handbook (FSH) 2309.13).

10) Wildlife capacity coefficients were calculated through the use of Habitat Capability Models (developed by interagency task forces) for each management indicator species (except wolf which useds the deer model).

11) Recreation use information and future human population estimates were used to calculate future recreation demand by ROS.

12) Alaska Department of Labor and the Forest Service IPASS Model were used to estimate future regional employment and income by resource.

13) Road construction and reconstruction costs are base on a three-year average (1984-87) of total road expenditures. Expenditures were again validated in 1990.

14) Road densities are based on paper harvest-transportation planning for each TLMP Management Area (MA) that has tentatively suitable forest lands.

15) The cost of construction and reconstruction of Log Transfer Facilities is based on individual facility estimates and location.

16) Fish production models were used to estimate Forest-wide fish production. Production from fish

enhancement projects is based on historic production data of similar projects.

17) Value of the fish resource is based on ADF&G's Alaska Catch and Commercial Production Fisheries Statistics Leaflets (Nos. 29-38).

18) Benefits derived from wildlife are based on a study entitled Economic Value of Big Game Hunting in Southeast Alaska. Swanson, et al.

The Forest Planning Model (FORPLAN)

Overview

FORPLAN is the primary modeling tool used to assure that land allocations and output schedules for alternatives and benchmarks are realistic and meet standards and guielines in a cost-efficient manner. In addition to being used to formulate alternatives and benchmarks, FORPLAN is used to perform detailed accounting and generate summary reports of information needed to construct the display tables in the EIS.

Neither FORPLAN nor any other model can perfectly represent how standards and guidelines will be implemented, therefore, results from the modeling process are only approximations of what to expect when any given alternative is implemented. The objective of modeling is to aid planners in foreseeing future consequences of management actions (alternatives). A choice between alternatives can be made even though the model may lack precision in describing specific attributes of a given alternative.

FORPLAN is a specialized matrix generator and report writer for a standard linear programming algorithm (FMPS). FMPS stands for Functional Mathematical Program System. This is the linear programming code used with FORPLAN on the UNIVAC 1194 at Fort Collins Colorado.

Linear programming is a mathematical technique for solving simultaneous linear equations subject to a certain set of constraints and a particular objective function. In its simplest form, this is expressed mathematically as:

Maximize: $z = c_1x_1+c_2x_2+\ldots c_nx_n$ (Objective Function)

Subject to: $a_1x_1+a_{12}x_2+\ldots a_{1n}x_n\leq b_1$

$a_{21}x_1+a_{22}x_2+\ldots a_{2n}x_n\leq b_2$ (Constraint set)

$a_{m1}x_1+a_{m2}x_2+\ldots a_{mn}x_n\leq b_m$

$x_j\geq o$

These mathematical expressions can also be shown in the following matrix:

Column j=1	Column j=2	Column j=3	Column j=n	Constraint Type	Right hand side constraint
Objective function	C_1x_1	C_2x_2	C_3x_3	C_nx_n	Maximize
Row i = 1 (Timber)	$a_{11}x_1$	$a_{12}x_2$	$a_{13}x_3$	$a_{1n}x_n$	$\geq b_1$
Row i = 2 (Land)	$a_{21}x_1$	$a_{22}x_2$	$a_{23}x_3$	$a_{2n}x_n$	$\leq b_2$
Row i = m	$a_{m1}x_1$	$a_{m2}x_2$	$a_{m3}x_3$	$a_{mn}x_n$	$=b_m$

$xj \geq 0$
$j = 1,\ldots n$

The linear equations (rows) represent resource production functions, costs, and acreage or other types of constraints. For example, row 1 might represent acres burned by wildfire. The columns (j=1,n) represent the different activities (prescriptions) that can occur over time on specific units of land called analysis areas (represented by xj). The aij's in the matrix are the production, cost, or resource coefficients associated with each prescription/analysis area combination. The bi's are the right-hand side constraints representing exact amounts of upper ($\leq$) or lower ($\geq$) constraint levels that must be met. In the example above, if row 1 represented timber production, the interpretation of the constraint

$$a_{11}x_1+a_{12}x_2+a_{13}x_3 \ldots +a_{1n}x_n \geq b_1$$

would be that the total amount of timber produced from all prescriptions and analysis areas must be greater than or equal to the amount b_1. If the objective function is to maximize present net value (PNV) the cj's are the benefits and costs (PNV) of each prescription.

Analysis Process Used in FORPLAN

The FORPLAN program has many internal limitations and parameters. These limitations must be adhered to when developing a model. For instance, the maximum number of constraints any one model can have is about 4,000 (this varies depending on constraint type). Initial size estimates of the Tongass model, given the desired level of detail, made it clear that three models would need to be developed; one model for each of the three Administrative Areas: Chatham, Ketchikan, and Stikine.

The individual FORPLAN models were then constructed using information designed specifically for each Administrative Area. These models represent the production functions

(costs, values, and resource coefficients) for the Forest in the mathematical format described above.

Once the models were formulated, a number of test runs were made to check for reasonableness and to make calibrations. By altering the objective function and constraint set, the models were able to estimate the resulting costs, benefits, outputs, activities, and land allocations for the particular theme or goal of an alternative or benchmark. A detailed description of model analysis can be found in this appendix under the Estimating Effects of Discretionary Constraints and Benchmarks sections.

Management activities modeled in FORPLAN were determined by the interdisciplinary team (ID team). This pre-FORPLAN analysis included identifying:

1. The activities that could be applied to the land.

2. The kinds of land to which each activity could be applied.

3. The costs, outputs, and benefits resulting from the application of each activity to a specific type of land.

This method provided the basis for a matrix of all possible management activities that could be modeled and their associated costs, outputs, and benefits.

Of the thirty-nine physical, biological, or administrative layers of resource related information in the GIS, 20 are considered essential to the Revision effort by the Revision Interdisciplinary Team. These information inventories are:

1) Elevation
2) Soils
3) The TLMP 141 Management Areas as modified by TTRA
4) Land Status
5) Each of the 228 USGS Quadrangles
6) Existing Recreation Places
7) Existing Recreation Sites
8) Roadless Areas
9) Existing Roads
10) Streams by each of nine process groups and three stream classes
11) Timber type map
12) 867 Value Comparison Units
13) Visual Resource inventory
14) Each watershed
15) Eligible Wild, Scenic, and Recreation Rivers
16) Wildlife Analysis Areas
17) Estuaries
18) Riparian
19) Managed Timber Stands
20) Tentatively Suitable Forest Lands

Although other layers of information will be used as needed, these 20 layers provide most of the information needed for analysis of the alternatives.

Capability Areas. Capability areas are the smallest units of land (or water) for which data is collected in forest planning. They are discrete and recognizable units classified primarily according to physical (soil), biological (vegetation), and issue (wilderness status) factors. All land within a capability area is homogeneous in its ability to produce resource outputs and in its production limitations.

The Tongass National Forest has 893,988 capability areas. Each capability area represents approximately 20 acres. A dot grid was developed by placing a point in the center of each 20 acre cell. The Forest then decided what information was needed for each capability area in order to assess resource opportunities and public issues. This information was collected and entered into the Forest's Geographic Information System (GIS). The point grid was then overlaid with the map information contained in the GIS. The map information under each point was then assigned as an attribute of the point. The map information from 39 different physical, biological, or administrative overlays was assigned to each point. These attributes as determined for each capability area are stored in computer files to form the Forest data base. The Forest used the ORACLE Database Management system in conjunction with the ARC/INFO Geographic Information System (GIS). Once entered into the system, information on capability areas could be retrieved, sorted, aggregated and analyzed.

Identification of Analysis Areas

The 893,988 capability areas, could not be used as such in FORPLAN. Use of such a large number of land units would be cumbersome, expensive, and greatly exceed the parameters in FORPLAN. Analysis areas were created to handle this problem. An analysis area is a conceptual aggregation of capability areas that responds in a uniform way to a management prescription.

A FORPLAN model has four main components: 1) activities and outputs, 2) management prescriptions, 3) constraints, and 4) the land base. The first three elements determine how the fourth (the land base) will be defined. Since the Tongass models are to analyze the activities and outputs associated with timber harvest scheduling the land base should be defined only by those characteristics significant to the timber resource. Determining these elements begins by scrutinizing what is known and what is wanted. The activities (costs) associated with timber harvesting are well documented as are the outputs (benefits) obtained from

the wood fiber. The management prescriptions applied to the forest are few and differ mostly by rotation age and dispersion amount. The constraints differ by alternative but often refer to a particular timber classification or a specific geographic area.

Choosing Analysis Area Identifiers. Many forest attributes were analyzed for incorporation into the FORPLAN land base. A series of statistical and iterative procedures were used to determine which of these attributes had the greatest significant contribution to the desired level of output detail. For instance, correlation studies showed that the existing volume class attribute (high to low) could predict productivity class of the regenerated stands thus eliminating the need for a productivity identifier. Of the 12 attributes tested, four were finally selected for input into the FORPLAN models. These four attributes are: 1) management area, 2) operability, 3) roaded classification, and 4) timber strata/volume class. A summary of each attribute follows.

Management Area (MA) - In the current Plan, there are 141 unique Management Areas which comprise groups of Value Comparison Units (VCU's). The November, 1990, Tongass Timber Reform Act (TTRA) recognized these 141 Management Areas in language addressing timber harvest of volume classes 6 and 7. TTRA directs that timber harvest of volume classes 6 and 7 will be proportional to their occurrence for the timber volume associated with the long term sales in each of the Management Areas. Wilderness and legislated LUD II land use designations established in TTRA split 7 of the original 141 Management Areas. Each of the Management Areas provide FORPLAN with a level of spatiality the other identifiers cannot. There are an additional seven Management Area with an "A" extension on the name. These MAs are represent areas that were legislatively withdrawn from timber harvest. They occur when part of a MA gets withdrawn. The withdrawn part gets the "A" extension. The FORPLAN models will not be concerned with these areas since only lands suitable for timber harvest is being modeled.

There are unique cost and constraint values attributed to each MA. These include all dispersion and proportional timber harvest constraints (see Formulation of Alternatives), log hauling cost, construction of log transfer facilities, road construction needs, and timber sale information.

Timber Harvest Operability - Operability defines the type of timber harvest methods necessary to get the trees from stump to landing. There are three different classes of operability, normal (tractor and highlead

cable), difficult (long span skyline), and isolated (helicopter).

Roaded Classification - This identifier specifies whether an area is presently roaded or unroaded. The road/roadless condition of an area greatly influences the cost of harvesting the timber. Unroaded areas require road construction while those presently roaded require only road maintenance and/or road reconstruction.

Volume Class/Strata - This attribute is the most significant attribute of all forest activities and outputs. Forest Strata vary from plantation-aged stands (average age of 20 years) to very high volume old-growth stands (Strata D, 50+ MBF per acre). These stratifications often determine economic viability of an area and the quality and capacity of wildlife habitat. There are six different stratifications of volume class.

With the selection of four level identifiers, the next step was to estimate the number of possible analysis area combinations. The maximum number possible is the product of the number of levels in each identifier:

141 MAs x 3 Operability Classes x 2 road/unroaded x 6 Vol Classes = **5,076 Potential Analysis Areas**

Of course, all combinations are unlikely to occur so the actual number should be less than 5,076.

Modeling of Tentatively Suitable Only. It should be noted here that the FORPLAN models for the Tongass will only be analyzing land classified as tentatively suitable for timber harvest. This means only those lands considered for timber harvest will be entered into the models. Of the approximate 17 million acres of Tongass National Forest only 2.56 million are classified as tentatively suitable. The process for determining suitability can be found in Appendix A, "Timber Suitability Classification," of the Proposed Revised Forest Plan.

Actual Total Analysis Areas. Once the identifiers were determined, the GIS data base was queried to calculate the actual number of unique analysis areas. This resulted in a total of 1865 unique analysis areas Forest-wide. Summary of these analysis areas showed almost one third being less than 50 acres in size. Because of rounding and other mathematical necessities within the FORPLAN matrix, small values tend to "get lost," especially when very large values are in the same model. For this reason, all analysis areas less than 100 acres were aggregated into a larger analysis area. This meant that an identifier of the small analysis areas would have to be altered.

Aggregation of Analysis Areas. Analysis showed that the roaded/unroaded identifier had the least overall impact (i.e., minor contribution to uniqueness) and was responsible for the majority of small analysis areas (less than 30 acres).

The aggregation process: the small analysis areas would be aggregated into the one that matched when roaded condition was ignored. If a match could not be found at that point then operability was ignored and a match found based on MA and volume class. If still no match could be found then the last identifier to be aggregated was volume class. The need to aggregate over volume class occurred infrequently and only when a Management Area had very few acres of tentatively suitable forest lands. Management Area was never aggregated because the spatial benefits provided by this identifier would have been lost. Level identifiers are shown in Table B-1.

Table B-1.
FORPLAN Level Identifiers

Type	Identifiers
Management Area	MA-C01 through MA-C61 MA-K01 through MA-K45 MA-S01 through MA-S35
Logging Operability	Tractor/Standard Highlead Cable Skyline/Suspension Isolated Stand (Helicopter)
Roaded Condition	Unroaded Roaded
Volume Class/Strata	Plant/Seed/Saplings; Young Growth Old Growth Strata A Old Growth Strata B Old Growth Strata C Old Growth Strata D

Development of Management Prescriptions

A prescription is a management practice, or theme, applied to a specific land area. The planning process concerns the allocation of land to various management prescriptions. The range of prescriptions describes the possible activities for a given analysis area. FORPLAN allocates land to prescriptions based on forest constraints and the given management alternative.

Prescriptions were developed by the ID team to represent the full range of possible management activities and outputs.

The interdisciplinary team quantified the outputs, costs, and benefits that would occur when a prescription was applied to a given analysis area or land unit. This quantification process produced the output, cost, and benefit coefficients that are used in FORPLAN yield and economic tables. The ID team, during their development of prescriptions, ensured that the specific management requirements set forth in CFR 219.27 would be met in accomplishing the goals and objectives for the Forest.

FORPLAN prescriptions were developed to allow consideration of a full range of management activities on the analysis areas. A minimum level prescription was created for each analysis area to allow a choice between selecting the possible intensive practices or selecting no active management practice. Limiting the number of available prescriptions is a constraint. The only criterion used to eliminate timber options concerned technical feasibility. For example, tractor logging was not considered on slopes greater than 60 percent. Other than this criterion of technical feasibility, all timber options were included in the model. The development of timber options was not limited by economic efficiency. No available timber options were eliminated from consideration because they produced a negative Present Net Value (PNV) or even a lesser PNV than some other timber option. A full range of timber options with varying levels of economic efficiency was available to the model. The FORPLAN prescriptions analyzed are briefly described below. Additional information about these prescriptions and the prescription development process is included in EIS Chapter 2 and in the planning records.

FORPLAN Prescriptions Unique to Analysis Areas.

Minimum Level/Maintenance. - Applies minimum custodial direction for all resources to all analysis areas. There are no associated developed recreation, timber, or watershed treatment outputs. In essence, this is the prescription FORPLAN would have assigned to unsuitable lands if they were included in the model.

Clearcut without precommercial thinning. - Removal of all merchantable commercial trees within a stand in one operation. The stand receives no subsequent precommercial thinning treatment.

Clearcut with thinning. - Removal of all merchantable commercial trees within a stand in one operation. The stand receives a subsequent precommercial thin after 15 years.

Selective harvesting. - Cutting trees with the objective of producing uneven-aged stands with regeneration of desirable species. Trees are harvested singly or in

small groups normally less than 2 acres. Primary emphasis is other than timber production.

Log Transfer Facility (LTF) construction. - The construction or reconstruction of LTF's designed to permit transfer of harvested logs into saltwater for tow or barge to a mill site.

The relationship between these FORPLAN prescriptions and the Land Use Designations is illustrated in Table B-2.

Table B-2
Relationship of FORPLAN Prescriptions to Land Use Designations

Land Use Designation	FORPLAN Prescription
Wilderness	N/A 3/
Wilderness National Monument	N/A
Nonwilderness National Monument	N/A
Land Use Designation II	N/A
Research Natural Area	N/A
Beach Fringe and Estuary	N/A
Primitive Recreation	N/A
Enacted Municipal Watersheds	N/A
Semi-primitive Recreation	N/A
Old-Growth Habitat	N/A
Experimental Forests	N/A
Other Areas	N/A
Transportation and Utility Systems	N/A
Special Interest Areas	N/A
Wild Rivers	N/A
Scenic Viewshed	Maintenance Clearcut without PCT Clearcut with PCT 4/ Selective cutting LTF Construction
Modified Landscape	Maintenance Clearcut without PCT Clearcut with PCT Selective cutting LTF Construction
Minerals	Min Level
Timber Production	Maintenance Clearcut without PCT Clearcut with PCT Selective cutting LTF Construction
Fish Habitat and Water Quality Requirements	Maintenance Selective cutting
Stream and Lake Protection	Maintenance Selective cutting

Table B-2 (continued)
Relationship of FORPLAN Prescriptions
to Land Use Designations

Management Area Prescription	FORPLAN Prescription
Scenic Rivers.	Maintenance
	Clearcut without PCT
	Clearcut with PCT
	Selective cutting
	LTF Construction
Recreation Rivers.	Maintenance
	Clearcut without PCT
	Clearcut with PCT
	Selective cutting
	LTF Construction

3/ Not Applicable. Lands managed under these prescriptions are classified Unsuitable for Timber Harvest, therefore are not included in the FORPLAN land base.

4/ PCT is an abbreviation for precommercial thinning

Time Periods. The basic reporting period to facilitate modeling the schedule of outputs and activities for the 50-year planning horizon (160-year timber horizon) is 10 years. Consequently, outputs are modeled as totals or averages for 10-year periods, and constraints were applied to outputs or activities on a 10-year basis.

Development of Yield Coefficients

There are two basic types of output/activity yields that were specified in the FORPLAN model: 1) yield streams of the outputs/activities that cannot be expressed as a function of some other outputs/activities (independent), and 2) outputs/activities that can be expressed as a function of the independent outputs/activities (dependent).

The Tongass FORPLAN model has both independent and dependent activities and outputs. These are listed below in Table B-3. The table is followed by a brief explanation of how the values were generated and will include the relationship of each of the dependent outputs to the independent outputs. Only timber and wildlife outputs were estimated within FORPLAN; all other resource outputs were analyzed external to the Model.

Table B-3
Outputs/Activities Tracked
Inside the FORPLAN Model

Code	Outputs	Units
	Timber Resource	
SALE	Timber Sale Preparation And Administration	MBF
PLNT	Reforestation (Natural)	Acres
PCTH	Precommercial Thinning	Acres
MBF-	Softwood Sawtimber From Even-aged Mgt. Areas	MBF
TSBF	Softwood Sawtimber From Uneven-aged Mgt. Areas	MBF
MCF-	Softwood Sawtimber From Even-Aged Mgt. Areas	MCF
TSCF	Softwood Sawtimber From Uneven-aged Mgt. Areas	MCF
TBRW	All Softwood Sawtimber	MCF
UTLB	Utility Volume Harvested	MBF
UTLC	Utility Volume Harvested	MCF
LTSY	Long-Term Sustained Yield Contribution	MCF
INVN	Standing Timber Inventory	MCF
DISP	Acres Of Openings (Existing and Future)	Acres
	Transportation Resource	
RD-R	Road Reconstruction	Miles
RD-L	Local Road Construction	Miles
RD-A	Collector Road Construction	Miles
LTFS	Log Transfer Facility Construction	Dollars
RD-M	Road Maintenance	Miles
HAUL	Timber Hauled	MBF
	Land Allocation Tracking	
AC-T	Total Acres Allocated To A Land Use Designation	Acres
AC-I	Acres Of A FORPLAN Prescription Implemented At One Time	Acres
	Wildlife Resource	
CREP	Brown Creeper Population Capability	Birds
WODP	Hairy Woodpecker Population Capability	Birds
SAPS	Red-Breasted Sapsucker Population Capability	Birds
SQRL	Red Squirrel Population Capability	Animals
MRTN	Marten Population Capability	Animals
EAGL	Bald Eagle Population Capability	Birdsls
BKBR	Black Bear Population Capability	Animals
BNBR	Brown Bear Population Capability	Animals
OTER	River Otter Population Capability	Animals
DEER	Sitka Black-Tailed Deer Population Capability	Animals
GOAT	Mountain Goat Population Capability	Animals
GSSE	Vancouver Canada Goose Population Capability	Birds
CRHS	Brown Creeper Habitat Suitability Index (HSI)	Total HSI
WOHS	Hairy Woodpecker Habitat Suitability Index (HSI)	Total HSI
SAHS	R-B Sapsucker Habitat Suitability Index (HSI)	Total HSI

Table B-3 (continued)
Outputs/Activities Tracked
Inside the FORPLAN Model

Code	Outputs	Units
	Wildlife Resource	
SQHS	Red Squirrel Habitat Suitability Index (HSI)	Total HSI
MRHS	Marten Habitat Suitability Index (HSI)	Total HSI
EAHS	Bald Eagle Habitat Suitability Index (HSI)	Total HSI
OTHS	River Otter Habitat Suitability Index (HSI)	Total HSI
BKHS	Black Bear Habitat Suitability Index (HSI)	Total HSI
BNHS	Brown Bear Habitat Suitability Index (HSI)	Total HSI
DEHS	Sitka Deer Habitat Suitability Index (HSI)	Total HSI
GOHS	Mountain Goat Habitat Suitability Index (HSI)	Total HSI
GSHS	VC Canada Goose Habitat Suitability Index (HSI)	Total HSI

Description of Activities and Outputs.

The following is a description of the coefficients for outputs used both inside and outside of FORPLAN. A brief discussion of how each coefficient was developed is included here. A more detailed discussion is available in the Forest planning records.

Timber.

ACTIVITY: SALE (Timber Sale Prep. and Admin.)
SALE represents the amount of timber that is prepared for sale and harvest. The costs of preparing and administering the timber sales are associated with this activity. The volume component of SALE is equal to the sum of outputs MMBF and TSBF. This activity is linked to those FORPLAN prescriptions which include timber harvest.

ACTIVITY: PLNT (Reforestation)
Following a clearcut, the land must be reforested. The number of acres that are regenerated is PLNT. The reforestation occurs naturally soon after harvest. The costs of certifying that the stand is reforested are associated with this activity. This activity is linked to those FORPLAN prescriptions which use clearcutting as the final harvest method.

ACTIVITY: PCTH (Precommercial Thin)
A precommercial thin takes place when the stand is 15 years old. The volume thinned is not sold nor does it, in itself, provide financial returns, hence, a precommercial thin. The benefits of the thin are improved stand growth and higher timber yields in the future. The number of acres receiving these thins is tracked within output PCTH. Not all stands are precommercial thinned. This activity is only linked to

those FORPLAN prescriptions which include precommercial thinning.

OUTPUT: MBF- and MCF- (Sawtimber from clearcut areas)
MBF- is timber volume in thousands of board feet;
MCF- is the corresponding volume in thousands of cubic feet. These outputs track the timber volume being harvested from all areas being managed under an even-aged timber prescription. These outputs occur when the stand is clearcut. At this time, all volume is removed from the acres harvested and the age of the stand becomes 0 years old. This initiates reforestation and the start of a new rotation cycle.

The existing old-growth tables are by MAPPED volume class derived by running the 1980-85 inventory through SEAPROG - version 27 of the submittal system. The output is net live volume for trees with a DBH of at least nine inches. This volume is based on a 32-foot log scale.

There are two sets of even-age second growth yield tables. The first set represents fully stocked volume by administrative area. These were produced from version 28 of the SEAPROG submittal system running seedling/sapling inventory plots without controlling species composition. The second set is empirical, representing expected net volume from the timber stand. This set of yield tables was derived from the fully stocked yield tables with the following reductions:

- A flat factor of 1.0 percent for breakage.

- A variable factor by age for defect derived from figure 8 of Farr, et. al. 1976.

- A flat factor of 11.4 percent (Taylor 1934, p.17) to account for the unstocked areas of the regenerated stands. The yield was reduced by this percentage rather than removing those unstocked areas from the land base. Altering the stand acreage to account for the unstocked was impossible without incorporated bias into the land base. To ensure the validity of this approach, sensitivity tests were conducted to determine the impacts of both the yields reduction and land base alteration methods. These tests showed the yield reduction method effectively and efficiently modeled the unstocked areas on the forest. Additional information can be found in the planning record.

No adjustments, other than stocking, were applied for ages less than 70 since no harvest of younger ages is anticipated.

Differences in volume between Administrative Areas for the same treatment and site index is explained by greater diameter growth at lower latitudes, differences in

composition, tree value classes, and how the model selects trees to harvest when species composition is not controlled. There is variation in volume output between individual plots or stands within sample sets which produced the averages used in the tables.

Verification of SEAPROG has been limited to comparing SEAPROG results with the actual current volumes, etc., on six permanent plots with current ages ranging from 88 to 128 years. Model projections ranged from 25 to 49 years. Percent compared to actual differences ranged from -9 percent to +19 percent for total cubic foot volume but the combined difference was only +0.5 percent. These were all unthinned plots. Refinement of SEAPROG is an ongoing effort and verification of modeled thinning is underway at the present time.

OUTPUT: TSBF and TSCF (Sawtimber from uneven-aged management.)
TSBF is timber volume in thousands of board feet;
TSCF- is the corresponding volume in thousands of cubic feet. These outputs track the volume being harvested from all areas being managed by uneven-aged prescriptions. Harvest volumes were calculated by determining the mix of management activities permitted in riparian areas specified in the Standards and Guidelines. The Standards and Guidelines estimate the mix of /clearcutting/group selection/no harvest/ which can occur in riparian areas. Next, the sustained yield of these activities were derived from the timber yield tables for regenerated stands. A weighted average of the sustained yields were then taken based on the mix of activities specified in the standards and guidelines. This then became the yield for the riparian areas.

The 100 foot no commercial timber harvest buffers on Class I streams and Class II streams that flow directly into Class I streams are not tentatively suitable and thus not part of the FORPLAN analysis areas. Only the riparian areas outside of the 100 foot buffer are considered in the FORPLAN prescriptions.

OUTPUT: TBRW (All sawtimber harvested)
TBRW is the total volume of all timber harvested in thousands of cubic feet. It is an aggregate of MCF- and TSBF. This output is primarily used for reporting and constraining purposes within the model.

OUTPUT: UTLB and UTLC (Utility volume from timber harvested)
UTLB is utility volume in thousands of board feet and UTLC is the corresponding thousand cubic foot volume. Utility logs are defined as logs with less than one-third net sawlog volume but containing at least 50 percent firm usable pulp chips. Utility volume is produced with every timber harvest. The proportion of utility to sawtimber volume

varies depending on location and productivity of the harvested stand.

OUTPUT: LTSY (Long-term Sustained Yield)
The long-term sustained yield value is internally calculated within FORPLAN and is reported by the output LTSY in MCF. Long-term sustained yield is the amount of timber that can be harvested for perpetuity without ever depleting the forest. In essence, the long-term sustained yield volume is equal to annual growth. In formulating this value, FORPLAN uses those areas assigned to timber management (harvesting) prescriptions. The regenerated stand's volume is divided by the rotation age. This average, when added to the average for all other timber lands, is the long-term sustained yield of the forest. LTSY is calculated in cubic feet, not board feet. This follows national direction as stated in Forest Service Manual 2409.13.

OUTPUT: INVN (Inventory)
The volume of standing timber is calculated internally in FORPLAN and is reported by the output INVN. This volume is based on all the acres capable of being assigned a timber emphasis prescription, not only those given a timber prescription. It reports the total standing volume in any decade.

Transportation

The majority of road development within FORPLAN is dependent upon timber activities.

ACTIVITY: RD-R (Road Reconstruction)
When an existing, but unmaintained, road system is re-utilized for timber harvesting activities, it requires reconstruction. RD-R is the miles of roads that are reconstructed throughout the planning horizon. This reconstruction is usually done for the purposes of rehabilitating the travel way and drainage structures.

ACTIVITY: RD-L (Local Road Construction)
All new road development is reported as RD-L in miles of road constructed. The amount of roading required to access timber is dependent on the geographical location of the timber stand. The road coefficients were developed based on the number of miles needed to access 1,000 acres of suitable timber. The coefficients were derived for specific geographic locales based on paper harvest/transportation planning on each of the 3 Administrative Areas.

ACTIVITY: RD-A (Arterial and Collector Road Construction)
Suitable timber stands are scattered throughout many large unroaded areas. Since the local road coefficients would only build the roads within the particular pockets of commercial timber, collector road coefficients were developed to connect the local road coefficients into a

logical transportation network. Unique coefficients were developed for each of the 141 Management Areas to account for the differences in distribution of tentatively suitable timber lands to determine an appropriate level of collector roads needed. When any timber stand in the area is scheduled for harvesting, the network of collector roads is scheduled for construction.

ACTIVITY: RD-M (Road Maintenance)
All local new and reconstructed roads have an annual maintenance cost. Cost is based on the total miles of road being maintained and recorded in RD-M. This cost is incurred every period after the road is constructed.

ACTIVITY: LTFS (Log Transfer Facility Construction)
LTFS records the costs of construction and reconstruction of log transfer facilities. LTFs are constructed, or reconstructed, for the purpose of moving timber from land to saltwater to either be towed or barged to a mill. The number and location of LTFs to be constructed were developed for each management area. LTF location was determined based upon the distribution of suitable forest lands and paper harvest/transportation plans. The amount of investment needed for LTF construction depends on the amount of land being allocated to timber harvest prescriptions, the type of coastline on which construction is to take place, and the type of facility to be constructed. For example, a simple 15 percent three rail slide in a protected cove may only cost $40,000, while a barge dock on open coastline may cost over $1 million.

ACTIVITY: HAUL (Timber Hauling)
The amount of timber, in MBF (thousands of board feet), moved from a landing to a mill is HAUL. The cost coefficients used for HAUL are based on geographic location and the forms of transportation utilized to move the timber (e.g., truck, tug for raft towing or barge, etc.). All timber is subject to haul costs. These costs vary from $21 to $67/MBF in the FORPLAN analysis areas.

Land Allocation/Implementation Tracking.

Several outputs are included in the FORPLAN model to aid in interpreting the prescription allocations.

OUTPUT: AC-T (Acres allocated to a FORPLAN prescription)
The number of acres allocated to a FORPLAN prescription is AC-T. This output reports how many acres have to be assigned to be managed by a particular management emphasis.

OUTPUT: AC-I (Acres Implemented at one time)
This output reports the actual number of acres subjected to a management activity (e.g., thinning) and at what time (e.g., decade 3) it occurs.

Wildlife Resources.

A significant portion of model development was directed toward the accurate portrayal of effects on the management indicator species. Management Indicator Species (MIS) are vertebrate or invertebrate species whose population changes are believed to indicate the effects of land management activities (USDA Forest Service 1982). MIS are used as a technique to promote more effective management of wildlife and fish habitats on National Forest Lands. Through the MIS concept, the total number of species that occurs within a planning area is reduced to a manageable set of species that collectively represent the complex of habitats, species, and associated management concerns. MIS are used to meet the requirements of the National Forest Management Act for maintaining well-distributed population viability in the Management Areas; to measure change in biological diversity; and to establish management goals for species used by the public. Population viability is the ability of a population to sustain itself naturally.

All but one of the 13 wildlife MIS were modeled in FORPLAN. Wolf were analyzed outside of FORPLAN using deer population data since this important prey base is the primary indicator of a healthy wolf population. Obtaining the desired wildlife coefficients involved linking the habitat capability models in the GIS database. The result of running the habitat capability models on the GIS database was the assignment of a habitat suitability index and population estimate to each 20 acre polygon (the 893,988 capability areas) on the Forest for each MIS. The GIS database was then used to calculate the average HSI value for each species for all of the 1263 analysis areas used in the FORPLAN model.

HSI yield tables for the existing stands were developed for each species. Changes in HSI due to timber harvesting were predicted and incorporated into the FORPLAN model. At this point, FORPLAN could be used to predict the total HSI score for any species at any point in the planning horizon for each of the 1,263 analysis areas.

The next step was to translate these HSI scores into habitat capability, i.e., the population capacity of an area. Utilizing the population capacity values for perfect habitat, coefficients were developed to predict population capacity in less-than-optimal conditions. A square mile of what is considered optimal habitat (HSI=1.0) has the capacity to maintain the following number of species.

Species	Population Capacity Per Sq. Mile (HSI=1.0)
Sitka black-tailed deer	100.0
Brown creeper	96.0
Hairy woodpecker	32.0
Red-breasted sapsucker	134.0
Red squirrel	1280.0
Marten	2.72
Bald eagle	26.0
Black bear	1.9
Brown bear	2.47
River otter	5.0
Mountain goat	11.4
Vancouver Canada goose	6.0

The relationship between HSI and population is linear. For rationale, see the individual wildlife model reports described later in this appendix. This means that area with a brown creeper HSI of 0.5 would have a capacity of 48 individuals per square mile (96.0 x 0.5 = 48). Linear relationships make estimating animal populations in FORPLAN a simple matter. By dividing each maximum capacity population by 640 (the number of acres in a square mile) the resulting factor is the maximum capacity per acre. Since the relationship between HSI and capacity is linear, the per acre coefficient can be multiplied by any HSI value (0.0 through 1.0) to obtain population values. For example;

Bald eagle capacity, HSI=1.0, is 26 per square mile.

26 individuals/640 acres per sq mi. = 0.040625 per acre

If an acre of land is estimated to have an eagle HSI of 0.6 then the population capacity for that acre is:

0.6 HSI x 0.040625 eagles per acre = 0.0244 per acre

A square mile area of this same HSI value may contain a population capacity of 0.0244 x 640 acres = 15.6 or 16.

This process of modeling MIS populations was carried out for all 12 species and all alternatives. Again, wolf was calculated separately outside of FORPLAN. The wildlife outputs utilized in FORPLAN are discussed below.

The 13 wildlife indicator species each have a habitat suitability index indicating the ability of an acre of habitat to support each specie. The range of values is between 0.0 and 1.0 inclusive where 0.0 would mean the acre would likely not support any of the specie and 1.0 being optimal habitat. Every managed acre has a habitat suitability index for each specie. These values change over time as management activities alter the vegetative condition. This index determines the carrying capacity. Individual wildlife model reports found later in this

appendix provide the rationale and display the specific values for different vegetative conditions.

The FORPLAN wildlife outputs for suitability index and habitat capability are:

OUTPUT: CRHS (Brown Creeper Habitat Suitability Index)

OUTPUT: WOHS (Hairy Woodpecker Habitat Suitability Index)

OUTPUT: SAHS (Red-breasted Sapsucker Habitat Suitability Index)

OUTPUT: SQHS (Red Squirrel Habitat Suitability Index)

OUTPUT: CREP (Brown Creeper Habitat Suitability Index)

OUTPUT: MRHS (Marten Habitat Suitability INdex)

OUTPUT: EAHS (Bald Eagle Habitat Suitability Index.

OUTPUT: OTHS (River Otter Habitat Suitability Index)

OUTPUT: BKHS (Black Bear Habitat Suitability Index)

OUTPUT: BNHS (Brown Bear Habitat Suitability Index)

OUTPUT: DEHS (Sitka Deer Habitat Suitability Index)

OUTPUT: GOHS (Mountain Goat Habitat Suitability Index)

OUTPUT: GSHS (VC Canada goose Habitat Suitability Index)

OUTPUT: CREP (Brown Creeper Habitat Capability)
A CRHS value of 1.0 (optimal habitat) is equivalent to a creeper capacity, CREP, of 0.15 creepers per acre (or 96 creepers per square mile). By summing the CREP values for each acre, the brown creeper capacity, CREP, for the Forest can be estimated.

OUTPUT: WODP (Hairy Woodpecker Habitat Capability)
A WOHS value of 1.0 (optimal habitat) is equivalent to a woodpecker capacity, WODP, of 0.05 woodpeckers per acre (or 32 woodpeckers per square mile). By summing the WODP values for each acre, the hairy woodpecker capacity, WODP, for the Forest can be estimated.

OUTPUT: SAPS (Red-breasted Sapsucker Habitat Capability)
A SAHS value of 1.0 (optimal habitat) is equivalent to a sapsucker capacity, SAPS, of 0.2094 sapsuckers per acre (or 134 sapsuckers per square mile). By summing the SAPS values for each acre, the sapsucker capacity, SAPS, for the Forest can be estimated.

OUTPUT: SQRL (Red Squirrel Habitat Capability)

A SQHS value of 1.0 (optimal habitat) is equivalent to a red squirrel capacity, SQRL, of 2.0 squirrels per acre (or 1280 squirrels per square mile). By summing the SQRL values for each acre, the red squirrel capacity, SQRL, for the Forest can be estimated.

OUTPUT: MRTN (Marten Habitat Capability)
A MRHS value of 1.0 (optimal habitat) is equivalent to a marten capacity, MRTN, of 0.00425 martens per acre (or 2.72 martens per square mile). By summing the MRTN values for each acre, the marten capacity, MRTN, for the Forest can be estimated.

OUTPUT: EAGL (Bald Eagle Habitat Capability)
A EAHS value of 1.0 (optimal habitat) is equivalent to an eagle capacity, EAGL, of 0.0406 eagles per acre (or 26 eagles per square mile). By summing the EAGL values for each acre, the bald eagle capacity, EAGL, for the Forest can be estimated.

OUTPUT: BKBR (Black Bear Habitat Capability)
A BKHS value of 1.0 (optimal habitat) is equivalent to a bear capacity, BKBR, of 0.0030 black bears per acre (or 1.9 black bears per square mile). By summing the BKBR values for each acre, the black bear capacity, BKBR, for the Forest can be estimated.

OUTPUT: BNBR (Brown Bear Habitat Capability)
A BNHS value of 1.0 (optimal habitat) is equivalent to a brown bear capacity, BNBR, of 0.0039 brown bears per acre (or 2.5 brown bears per square mile). By summing the BNBR values for each acre, the brown bear capacity, BNBR, for the Forest can be estimated.

OUTPUT: OTER (River Otter Habitat Capability)
An OTHS value of 1.0 (optimal habitat) is equivalent to an otter capacity, OTER, of 0.0078 otters per acre (or 5 otters per square mile). By summing the OTER values for each acre, the river otter capacity, OTER, for the Forest can be estimated.

OUTPUT: DEER (Sitka Black-Tailed Deer Habitat Capability)
A DEHS value of 1.0 (optimal habitat) is equivalent to a deer capacity, DEER, of 0.1563 deer per acre (or 100 deer per square mile). By summing the DEER values for each acre, the Sitka deer capacity, DEER, for geozones and the Forest can be estimated.

OUTPUT: GOAT (Mountain Goat Habitat Capability)
A GOHS value of 1.0 (optimal habitat) is equivalent to a goat capacity, GOAT, of 0.0178 goat per acre (or 11.4 goat per square mile). By summing the GOAT values for each acre, the mountain goat capacity, GOAT, for the Forest can be estimated.

OUTPUT: GSSE (Vancouver Canada Goose Habitat Capability) A GSHS value of 1.0 (optimal habitat) is equivalent to a goose capacity, GSSE, of 0.0094 geese per acre (or 6 geese per square mile). By summing the GSSE values for each acre, the VC Canada goose capacity, GSSE, for the Forest can be estimated.

The Forest Planning Model (Outside of FORPLAN)

Analysis Process Outside of FORPLAN

Recreation, hunting, and fish production were analyzed outside of FORPLAN for two reasons: 1) FORPLAN is unable to properly account for certain elements which drive demand for certain activities (e.g., population change, trends of usage), and 2) previous analysis may have shown little or no impacts from management activities so further analysis with the same data would have been redundant.

Recreation. The capacity, demand, and costs of recreation were modeled outside of FORPLAN. Recreation areas on the Forest have been delineated and these areas provide the recreation capacity and account for the management costs. Projected demand is equated to use as long as it is less than or equal to the amount of capacity. In the event that capacity is less than anticipated demand, use is assumed to equate to demand. In estimating future recreation availability on the Tongass, a maximum potential effects analysis was used. Also, some assumptions were made about certain areas and recreational settings once timber harvest activities had occurred.

First, recreation opportunities with similar settings were aggregated as follows:

- Group 0 - Identified as not providing recreation opportunities
- Group 1 - Primitive and Semi-primitive Nonmotorized
- Group 2 - Semi-primitive Motorized
- Group 3 - Roaded Natural and Roaded Modified

Next, assumptions were made as to what would happen if timber harvesting took place in the Recreation Group. The assumptions are:

1) Timber harvesting in Group 1 or Group 2 would remove any potential for recreation (becomes Group 0), unless;

2) The area is accessible by ferry or roads, in which case, the area would provide Roaded recreational opportunities (becomes Group 3).

3) If the area is of Group 3, then timber harvesting or any land disturbing activity would have no effect on

the area's ability to provide Roaded recreational opportunities (stays Group 3).

Next, through a series of GIS queries, all recreation places allocated to a timber harvest prescription were placed in their new recreation group and capacity was recalculated. This allowed planners to analyze not just the capacity of recreation opportunity, but the mix of different types of opportunities. The costs of maintaining and providing recreation opportunities is also analyzed outside the FORPLAN model.

Hunting. The capacity of the Forest to provide hunting opportunities is based on population estimates of game species, which are based on habitat capability. Hunting capacity for deer, goat, brown bear, and black bear was calculated using population information from FORPLAN and GIS wildlife queries. Harvestable levels of the total population vary by species. See the discussion in the Wildlife Demand section of chapter 3 of the Supplement for a detailed discussion of hunting capacity, hunter demand and habitat capability.

Fish. Fish production capacity and the economics of the fisheries resource is modeled outside of FORPLAN. Timber management, done in accordance with TTRA, assures the protection of riparian areas by maintaining at least a 100 foot no commercial harvest buffer along Class I streams and those Class II streams flowing directly into Class I streams. Use of Best Management Practices (BMP), along all streams, provides further assurance of maintaining water quality and stream habitat.

Since the FORPLAN model analyzes only activities and outputs associated with timber harvesting, and since timber harvesting is not allowed adjacent to anadramous fish streams, no adverse effects on fish habitat are foreseen. The modeling of Fish in FORPLAN was unnecessary.

Mathematical Models used outside of FORPLAN. Three models, IPASS, SEAPROG, and HCM (Habitat Capability Models), are used to generate input data for FORPLAN. An input/output model was built using the IPASS system to estimate income and employment effects resulting from changes in Forest outputs and land allocations. HCM (Habitat Capability Models) were used to develop wildlife-related coefficients for use in FORPLAN. HCM is a system for organizing information about wildlife species and their habitats and the interrelationship between the two. This data was used to mimic Standards and Guidelines, evaluate species and habitat diversity, and identify special habitat needs. Timber yields for existing and regenerated stands were developed through the SEAPROG growth and yield model. SEAPROG used inventory and plot information to calculate

these yields. A more detailed description of each of these models follows.

IPASS

The IPASS system was used to develop an input-output model, impact multipliers, and employment and income estimates for the alternatives analyzed in this Supplement. IPASS is a system for developing local input-output models taken from the U.S. Department of Commerce's 1972 national input-output model (updated to 1977). Dollar impacts estimated for the system were further updated to 1982 dollars by using the Commerce Department's implicit price deflater for the gross national product.

The IPASS system was used to develop an input-output model of southeast Alaska. Estimates of historical expenditures by sectors associated with Forest outputs and Forest purchases from the local economy were then used with the input-output model to develop impact multipliers and estimated income and employment impacts for each alternative.

A number of assumptions used in the input-output modeling technique were made when interpreting the resulting income and employment estimates:

1. Historical transaction patterns associated with Forest outputs and purchases are assumed to hold in the future.

2. Transaction patterns (production functions) for industries in the local economy are assumed to be similar to those in the national economy and are assumed to hold in the future.

3. Income and employment impacts are assumed to occur in the same time period as the underlying changes in Forest outputs and purchases (no lagged effects are assumed).

As a result of these basic assumptions, employment and income effects estimated for the alternatives have relatively low reliability in absolute terms for future time periods; however, the income and employment estimates are reasonably accurate indicators of relative changes between the alternatives in the first decade.

SEAPROG

The existing old-growth tables are by MAPPED volume class derived by running the 1980-85 inventory through SEAPROG - version 27 of the submittal system. Output volume is net live based on 32-foot scale for trees 9.0 inches and larger DBH to a 6.0 inch top inside bark. Age and MAI values are not valid in uneven-age old-growth.

There are two sets of even-age second growth yield tables. The first is for fully stocked, live gross by Administrative Area, treatment and site index. They were produced from version 28 of the SEAPROG submittal system running seedling/sapling inventory plots without controlling species composition. The other set are empirical, representing expected net volume. They were produced from the first set by application of a flat factor of 11.4 percent (Taylor 1934, p. 17) less than full stocking, a flat factor of 1.0 percent for breakage, and a variable factor by age for defect derived from Figure 8 of Farr et. al. 1976. No adjustments, other than stocking, were applied for ages less than 70 since no harvest of younger ages is anticipated.

The apparent discrepencies in volume between Administrative Areas for the same treatment and site index is explained by greater diameter growth at lower latitudes, differences in composition, tree value classes, and how the model selects trees to harvest when species composition is not controlled. The user should also be aware of variation in volume output between individual plots or stands within sample sets which produced the averages used in the tables.

Verification of SEAPROG has been limited to comparing SEAPROG results with the actual current volumes, etc. on six permanent plots with current ages ranging from 88 to 128 years. Model projections ranged from 25 to 49 years. Predicted compared to actual differences ranged from -9 percent to +19 percent for total cubic foot volume but the combined difference was only +0.5 percent. These were all unthinned plots.

Improvements to SEAPROG is an ongoing effort and verification of modeled thinning is underway at the present time.

Wildlife Habitat Capability Models

Introduction

Habitat capability models were developed for each of the selected Management Indicator Species (MIS). Habitat Capability Models (HCMs) are a analytic technique developed by wildlife biologists in southeast Alaska. An HCM is a compilation of biological information that attempts to describe the important variables that contribute to habitat needs of each MIS.

These models were used to assist in the evaluation of likely outcomes of programmatic land management activities on wildlife habitats and populations over time. The objective of the HCM's is to estimate the capability of habitats to support animal populations. The end result of each model is an estimation of a habitat suitability index (HSI) and

associated population carrying capacity for each physical and biological condition on the Forest.

These habitat capability models were developed by an interagency task force consisting of members from the Alaska Department of Fish and Game, the United States Fish and Wildlife Service, and the USDA Forest Service. The models were run on the Forest GIS database to estimate wildlife habitat indices. These indices were then input into the FORPLAN model which tracked changes over time in these wildlife indices based on estimates of land disturbing activities that would be needed to implement each alternative.

Each model is in differing stages of development and completness. There has been relatively little wildlife habitat research in southeast Alaska when compared to the Lower 48. Therefore, the models have the likely potential of changes to coefficients over time as more research and administrative studies make improvements to the understanding of the habitat interrelationships. The degree of completeness is described in each model writeup.

A description of each Wildlife Habitat Capability model follows.

HABITAT CAPABILITY MODEL FOR MOUNTAIN GOATS IN SOUTHEAST ALASKA: WINTER HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of mountain goats (Oreamnos americanus). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Year-round range of mountain goat is evaluated in the model.

The historical distribution of mountain goats included mountainous areas from southcentral Alaska to south-central Washington. Their range extended south to central Idaho and east to western Alberta and Montana (Johnson 1977). The current distribution of mountain goats has been expanded outside of its historic range as a result of transplant programs (Dalrymple 1970). The natural distribution of mountain goats in southeast Alaska included the mainland mountains. They have also been successfully introduced on Baranof and Revillagigedo Islands. Presently mountain goat populations are generally stable or increasing throughout their range in Alaska and interest in hunting or observing

mountain goats continues to increase (Townsend 1986, Fox et al. in prep.).

Mountain goats are more sensitive to habitat change and hunting pressure than any other big game species in North America (Chadwick 1983). Studies throughout their range in North America have reported significant declines in populations of mountain goats following modification of habitats and disturbance from human activities (Chadwick 1973, Quaedulieg et al. 1973, Kuck 1977, Phelps et al. 1983). The potential for adverse effects of timber harvest and mining activities on mountain goats and their habitats throughout southeast Alaska currently exists (Schoen and Kirchhoff 1982, Smith and Raedeke 1982, Fox 1983, Smith 1986). This model is intended to describe the potential of habitats in southeast Alaska to support mountain goats and to provide a means to evaluate the affects of land management activities on this potential.

Habitat Use Information

A variety of vegetative food items are eaten by mountain goats throughout the year. These include foliage and seed heads of grasses, sedges, and bushes; foliage, stems, and flowers of forbs; leaves and twigs of shrubs and trees; leaves of ferns; and the entire aerial portion of mosses and lichens (Wigal and Coggins 1982). Foraging sites and forage composition change throughout the year.

Mountain goats have demonstrated a preference for shrub communities associated with south-facing avalanche slopes in the early spring (Schoen and Kirchhoff 1982). The herbaceous understory is one of the first areas to initiate plant growth in the spring. Rhizomes and new shoots of forbs and ferns in this community provide mountain goats with highly nutritious forage (Klein 1953, Hieljord 1971).

As snow melts during the summer, mountain goats move to higher elevation subalpine and alpine areas to feed on plants emerging from melting snowbanks (Fox 1978, Schoen and Kirchhoff 1982, Smith 1986). The new growth of sedges and forbs abundant in these areas are selected (Hieljord 1971).

Food available to mountain goats during the winter is much more restricted than during other seasons (Fox and Smith 1988). Accumulation of heavy wet snow in the alpine and subalpine areas, especially in southern southeast Alaska, covers available forage and forces mountain goats to lower elevation forested areas (Smith 1986). Plant species making up the bulk of mountain goat diet during the winter in those areas include conifers, lichens, mosses, and shrubs (Fox et al. in prep.). In some areas of northern southeast Alaska the snow is dryer and lighter. In these areas snow is blown off of ridge tops exposing plants and allowing the mountain goats to forage at higher elevations. Alpine forbs and

graminoids continue to be important components of the mountain goats' diet throughout the winter in these areas.

Behavioral strategies of mountain goats to avoid predators, particularly gray wolves (Canis lupus) also affect habitat use by mountain goats. Mountain goats generally move into steep and broken terrain characterized by the presence of cliffs, when approached by gray wolves (Fox and Streveler 1986). Fox (1983) reported most use of habitats by mountain goats in southeast Alaska was within 660-980 ft (200-300 m) of cliffs. McFetridge (1977a) also reported that 95 percent of observations of mountain goats were within 980 ft (300 m) of escape terrain during October and November. Hieljord (1971) estimated that mountain goats on Kodiak Island and in the Kenai Mountains spent most of their time within 900 feet (275 m) of escape terrain during summer. Smith (1986) reported that 95 percent of all relocations of radio-collared mountain goats in southern southeast Alaska were within 1300 feet (400 m) of cliffs and that all relocations were within 2600 feet (800 m). The need for escape terrain to be in close proximity is a critical factor in describing habitat for mountain goats.

Habitat Model

The primary considerations in the evaluation of habitat for mountain goat in southeast Alaska are availability of food and proximity to escape terrain. Availability of food is related to plant community and aspect. The relationship between these two variables and habitat suitability changes with season of the year.

Winter is the most limiting time of the year for mountain goats. Snow cover reduces the availability of plants to mountain goats. Alpine areas in southern southeast Alaska (i.e., Game Management Units 1A, 1B, and 4) are generally unavailable to mountain goats as foraging areas because of accumulation of dense snow. Conifer forests provide optimum habitat in southern southeast Alaska for mountain goats during this time period (Table 1). Forbs and shrubs remain available as forage in the higher volume, old-growth forests because snow depths are reduced by the tree canopy (Hanley and Rose 1987, Kirchhoff and Schoen 1987). Alpine areas in northern southeast Alaska (i.e., Game Management Units 1C, 1D, and 5) are often blown free of snow in the winter providing foraging opportunities for mountain goats. Therefore, alpine areas have a higher potential to support mountain goats in northern areas of southeast Alaska than in southern areas (Table 1). Although clearcuts provide forage, it may be generally unavailable to mountain goats in the winter because of snow accumulations. Stands of second growth forest are assumed to not have any value to mountain goats because of the lack of forage (Alaback 1982 and 1984).

Mountain goats prefer southerly aspects during the winter and avoided northerly aspects (Table 1) (Schoen and

Kirchhoff 1982). Southerly exposures receive more sunlight, are warmer, have a higher snow line, and accumulate less snow than northerly exposures. As a result, forage is more readily available and travel is less restricted. The index values assigned to southerly aspects are reduced by 70 percent for east/west aspects and by 90 percent for northerly aspects.

Prime escape terrain for mountain goats has been defined as slopes from 45^{o} to 75^{o} (Kuck 1973, Smith 1976, McFetridge 1977a, Fox 1978, Schoen and Kirchhoff 1982). Escape terrain in the model is assumed to be slopes (i.e., cliffs) greater than 50^{o}. Over 95 percent of all relocations of radio-marked mountain goats were within 1300 feet (400 m) of a cliff in southern southeast Alaska and all relocations were within 2600 ft (800 m) of cliffs (Smith 1986). Optimum habitat values were assumed to occur within 1300 feet (400 m) of a slope greater than 50^{o}. Habitat values of the area between 1300 feet and 2600 feet (400-800 m) of a cliff were reduced by 70 percent compared to areas that occur within 1300 ft (400 m) of a cliff. Habitats greater than 2600 feet (800 m) from a cliff were assumed to not have any habitat value for mountain goats. These relationships were assumed to be valid through all seasons regardless of vegetation, elevation, or aspect.

During the spring, mountain goats show a preference for areas where vegetation greens up early. This is reflected in the index value given to the shrub community (Table 1A). The shrubby avalanche chutes, especially on southerly aspects, are one of the first areas in the spring to produce new growth of forbs and shrubs. Clearcuts on southerly aspects also increase in value in the spring because of early foliage development (Reed 1983).

During summer and fall, mountain goats follow the snowline up into the subalpine zone, alpine and high-elevation avalanche chutes as the snow melts and new vegetation appears (Schoen and Kirchhoff 1982, March 1986). Consequently these high-elevation communities are assumed to provide optimum habitat during summer and fall (Table 2A). The value of conifer stands is assumed to be minimal during summer and fall because mountain goats spend very little time in these communities. Habitat selection is not influenced by aspect during summer and fall so index values do not consider this factor.

Habitat Capability Smith and Bovee (1984) estimated the density of mountain goats on winter range in southern southeast Alaska to be 11.4 animals/mi^2 (4.4/km^2). They based their definition of winter range on work reported in Smith (1986). Smith (1986) defined preferred winter range as low elevation, higher volume, old-growth forests on southerly aspects, within 1300 feet (400 m) of cliffs. This is the same definition of optimum winter habitat used in the this

model. The assumption is therefore made that optimum winter habitat will support 11.4 mountain goats/mi^2 (4.4/km^2). Density of mountain goats at other times of the year is assumed to approximate Smith and Bovee's (1984) figure for year-round habitats (i.e., 6 animals/mi^2 [2.3/km^2]).

Disturbance and Human-induced Mortality

McFetridge (1977b) indicated that use of suitable habitats by mountain goats may be reduced as a result of human activities. Chadwick (1973) reported that mountain goats will abandon otherwise suitable habitat following initiation of human activities. Five of 7 populations of mountain goats evaluated in British Columbia experienced population declines (Pendergast and Bindernagel 1977). Four of the declining populations were accessible by road; none of the stable populations were accessible by road. These reports and personal observations (Dinneford, Schoen, and Young) indicate that populations of mountain goats are very sensitive to disturbance and poaching following the establishment of human activities in occupied habitat.

The effects of several activities that may result in reductions in numbers of mountain goats were evaluated (Table 2). The potential capability of habitats in the vicinity of these habitats are reduced by multiplying the density calculated from the habitat model by the appropriate disturbance/mortality coefficient.

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on mountain goat populations. This will be done to ensure the model results approximate the results of independent field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

As a result of initial tests and comparing harvest data and pellet transect information, it was found that the model was not predicting carrying capacity as expected in certain areas. Therefore, some changes in the coefficients was made.

These changes lowered the forest-wide carrying capacity to roughly 305,000 deer. This phase of the model was used to to develop a Draft Deer Population Objectives Plan in winter, 1990-91.

Since then, an error was found, and corrected, in the GIS data base. Rerunning the model now shows a current carrying capacity of 287,000 deer. This phase of the model was used to assess effects of the alternatives in the DEIS.

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Table 1. Capability of habitats to support mountain goats during the winter (i.e., November through March) in southeast Alaska by distance to cliff and aspect.

	Distance to Cliff (Greater than 50° Slope)													
	Within 1300 feet (400 m)[a]						1300-2600 feet (400-800 m)						Greater Than 2600 feet (800 m)	
	Aspect						Aspect							
	SE-SW		E/W		NE-NW		SE-SW		E/W		NE-NW			
Habitat	Index	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den
old-growth forest														
Conifer														
20,000+ bf/ac[b]														
S. SE AK.	1.0	11.4[c]	0.3	3.4	0.1	1.1	0.3	3.4	0.1	1.1	0.0	0.0	0.0	0.0
SE AK.	0.8	9.1	0.2	2.3	0.1	1.1	0.2	2.3	0.1	1.1	0.0	0.0	0.0	0.0
8-20,000 bf/ac														
S. SE AK.	0.8	9.1	0.2	2.3	0.0	0.0	0.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0
S. SE AK.	0.6	6.8	0.1	1.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Deciduous	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Muskeg	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1 cont. Capability of habitats to support mountain goats during the winter (i.e., November through March) in southeast Alaska by distance to cliff and aspect.

	Distance to Cliff (Greater than 50° Slope)													
	Within 1300 feet (400 m)[a]						1300-2600 feet (400-800 m)						Greater Than 2600 feet (800 m)	
	Aspect						Aspect							
	SE-SW		E/W		NE-NW		SE-SW		E/W		NE-NW			
Habitat	Index	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den
Subalpine														
S. SE AK.	0.8	9.1	0.2	2.3	0.1	1.1	0.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0
N. SE AK.	0.6	6.8	0.2	2.3	0.1	1.1	0.2	2.3	0.0	0.0	0.0	0.0	0.0	0.0
Clearcut	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2nd. growth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nonforested														
Alpine														
S. SE AK.	0.3	3.4	0.1	1.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N. SE AK.	0.6	6.8	0.2	2.3	0.1	1.1	0.2	2.3	0.1	1.1	0.0	0.0	0.0	0.0
Avalanche Chutes	0.2	2.3	0.1	1.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Rock	0.5	5.7	0.2	2.3	0.1	1.1	0.2	2.2	0.1	1.1	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[a] This habitat includes the cliff polygon.

[b] bf/ac = boardfeet/acre

[c] Density is expressed in number of animals/mi^2. The density of mountain goats in optimum habitat (i.e., Index = 1.0) is assumed to be 11.4/mi^2 (4.4/km^2) (Smith 1986; Smith and Bovee 1984).

Table 1A. Capability of habitats to support mountain goats during spring (i.e., April - May) in southeast Alaska by distance to cliff and aspect.

	Distance to Cliff (Greater than 50° Slope)													
	Within 1300 feet (400 m)[a]						1300-2600 feet (400-800 m)						Greater Than 2600 feet (800 m)	
	Aspect						Aspect							
	SE-SW		E/W		NE-NW		SE-SW		E/W		NE-NW			
Habitat	Index	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den
Old-growth forest														
Conifer														
20,000+ bf/ac[b]														
S. SE AK.	0.9	10.3[a]	0.3	3.4	0.1	1.1	0.3	3.4	0.1	1.1	0.0	0.0	0.0	0.0
N. SE AK.	0.7	8.0	0.2	2.3	0.1	1.1	0.2	2.3	0.1	1.1	0.0	0.0	0.0	0.0
8-20,000 bf/ac														
S. SE AK.	0.7	8.0	0.2	2.3	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
N. SE AK.	0.6	6.8	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deciduous	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Noncomercial	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 1A cont. Capability of habitats to support mountain goats during spring (April - May) in southeast Alaska by distance to cliff and aspect.

	Distance to Cliff (Greater than 50° Slope)													
	Within 1300 feet (400 m)[a]						1300-2600 feet (400-800 m)						Greater Than 2600 feet (800 m)	
	Aspect						Aspect							
	SE-SW		E/W		NE-NW		SE-SW		E/W		NE-NW			
Habitat	Index	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den
Subalpine														
S. SE AK.	0.7	8.0	0.2	2.3	0.1	1.1	0.2	2.3	0.1	1.1	0.0	0.0	0.0	0.0
N. SE AK.	0.5	5.7	0.2	2.3	0.1	1.1	0.2	2.3	0.1	1.1	0.0	0.0	0.0	0.0
Clearcut	0.2	2.3	0.1	1.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
2nd growth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nonforest														
Alpine														
S. SE AK.	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
N. SE AK.	0.3	3.4	0.1	1.1	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0
Avalanche Chutes	1.0	11.4	0.3	3.4	0.1	1.1	0.3	3.4	0.1	1.1	0.0	0.0	0.0	0.0
Rock	0.5	5.7	0.2	2.3	0.1	1.1	0.2	2.3	0.1	1.1	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[a] Habitat includes the cliff polygon.

[b] bf/ac = boardfeet/acre

[c] Density is expressed in number of animals/mi^2. The density of mountain goats in optimum habitat (i.e., Index = 1.0) is assumed to be 11.4/mi^2 (4.4/km^2) (Smith 1986; Smith and Bovee 1984).

Table 2. Effects of disturbance on the habitat capability for mountain goats in southeast Alaska.

Activity/landscape Modification	Reduction Factor
FS cabin/developed campground/seasonal camp	
($\leq$ 1 mi radius)	0.9
Permanent camp site/ residence/float camp	
(< 1 mi radius)	0.6
(1-5 mi radius)	0.9
Access point (airstrip, dock, lake/float plane)	
($\leq$ 1 mi radius)	0.9
Road accessible to vehicles	
($\leq$ 2 mi radius)	0.8
Transportation link (ferry access/town)	
($\leq$ 2 mi radius)	0.6
Trails or road access limited to hiking	
($\leq$ 2 mi radius)	0.9

Table 2A. Capability of habitats to support mountain goats during summer and fall (June - October) in southeast Alaska by distance to cliff and aspect.

	Distance to Cliff (Greater than 50° Slope)													
	Within 1300 feet (400 m)[a]						1300-2600 feet (400-800 m)						Greater Than 2600 feet	
	Aspect						Aspect							
	SE-SW		E/W		NE-NW		SE-SW		E/W		NE-NW		(800 m)	
Habitat	Index	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den
old-growth forest														
Conifer	0.1	0.6[b]	0.1	0.6	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deciduous	0.2	1.2	0.2	1.2	0.2	1.2	0.1	0.6	0.1	0.6	0.1	0.6	0.0	0.0
Muskeg	0.1	0.6	0.1	0.6	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subalpine	0.9	5.4	0.9	5.4	0.9	5.4	0.3	1.8	0.3	1.8	0.3	1.8	0.0	0.0
Clearcut	0.3	1.8	0.3	1.8	0.3	1.8	0.1	0.6	0.1	0.6	0.1	0.6	0.0	0.0
2nd growth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2A cont. Capability of habitats to support mountain goats during summer and fall (June - October) in southeast Alaska by distance to cliff and aspect.

	Distance to Cliff (Greater than 50^{o} Slope)													
	Within 1300 feet (400 m)[a]						1300-2600 feet (400-800 m)						Greater Than 2600 feet (800 m)	
	Aspect						Aspect							
	SE-SW		E/W		NE-NW		SE-SW		E/W		NE-NW			
Habitat	Index	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den.	Ind.	Den
Nonforested														
Alpine	1.0	6.0	1.0	6.0	1.0	6.0	0.3	1.8	0.3	1.8	0.3	1.8	0.0	0.0
Avalanche Chutes	1.0	6.0	1.0	6.0	1.0	6.0	0.3	1.8	0.3	1.8	0.3	1.8	0.0	0.0
Rock	0.5	3.0	0.5	3.0	0.5	3.0	0.2	1.2	0.2	1.2	0.2	1.2	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

[a] Density is expressed in number of animals/mi^2. The density of mountain goats in optimum habitat (i.e., Index = 1.0) is assumed to be 6.0/mi^2 (2.3/km^2) during the summer and fall (Smith 1986; Smith and Bovee 1984).

HABITAT CAPABILITY MODEL FOR SITKA BLACK-TAILED DEER IN SOUTHEAST ALASKA: WINTER HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the Tongass Land Management Plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of Sitka black-tailed deer (*Odocoileus hemionus sitkensis*). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Only winter range is evaluated in the model because winter is assumed to be the most limiting season for Sitka black-tailed deer throughout the area (Hanley and McKendrick 1985). However, the quality of summer range should not be neglected. Quality of forage during the summer has a major influence on the reproductive capabilities of deer and the ability of deer to survive winter (Hanley et al. 1989). The availability of thermal cover may also be a critical factor during spring and summer rains when deer are in summer pelage (Parker 1988).

Sitka black-tailed deer are indigenous to the coastal regions of southeast Alaska and northwest British Columbia. The subspecies occupies the northern-most extreme that black-tailed deer are able to tolerate (Regelin 1979). This situation may make these deer more sensitive to modification of their habitat than other populations of deer (Merriam 1970). These deer are the major big game species in southeast Alaska, providing meat and recreation through annual harvests of over 15,000 animals (Johnson and Wood 1979; unpublished information, Alaska Department of Fish and Game). Deer also provide significant recreation opportunity for people who enjoy viewing wildlife (Langenau 1979). Both of these kinds of uses are expected to increase as tourism and human population size increases throughout southeast Alaska.

Effects of weather

Variations in winter weather have a direct effect on variations in deer populations (Verme 1969, Picton 1979a and 1984). Reduced flexibility in habitat use during cold, snowy weather, decreased home range size, and reduced mobility indicated the effect of winter weather on deer on Vancouver Island (McNay and Doyle 1987). Snow accumulations during single and consecutive winters has been demonstrated to be directly related to fawn:doe ratios and annual changes in deer populations in Michigan and Minnesota (Mech et al. 1987). Snow depth had the greatest influence on habitat selection by deer during severe winters on northern Vancouver Island than any of the other variables examined (Jones and Bunnell 1984). Other studies have also reported a correlation between snow depth and deer mortality or

population levels (Severinghaus 1947, Edwards 1956). Severe winters resulted in reduced diversity of forage available to deer, restricted mobility of deer, caused mortality of deer, and lowered recruitment rates of deer (Jones and Bunnell 1984).

Annual snowfall was found to be the best indicator of winter severity as related to habitat capability for Sitka black-tailed deer in southeast Alaska (Flynn and Kirchhoff in prep.). Value Comparison Units (VCUs) throughout southeast Alaska were rated in terms of typical winter severity (i.e., low [0-50 in], intermediate [51-115 in], deep [116-200 in], and extreme [200+ in] snow). The following was used to rate VCUs: 1) estimated mean annual snowfall for the past 72 years at selected weather stations (Table 1), 2) mean annual snowfall at low elevations as determined from a map published in the Environmental Atlas of Alaska, and 3) local knowledge of snowfall patterns in an area.

Habitat use

Food Habits

Sitka black-tailed deer consume nearly 60 species of plants throughout their geographic range (numerous studies cited by Hanley 1984). The preferred winter forage of Sitka black-tailed deer is succulent evergreen half-shrubs and forbs, including bunchberry dogwood (*Cornus canadensis*), five-leaved bramble (*Rubus pedatus*), gold thread (*Coptis aspleniifolia*), foamflower (*Tiarella trifoliata*), and pyrola (*Pyrola secunda*) (Schoen and Wallmo 1979). As snow accumulates at high elevations and covers these preferred forage species, deer will move downslope (Schoen and Kirchhoff 1985). When these preferred plants are covered with snow throughout the deer's winter range, the deer rely primarily on *Vaccinium* spp. shrubs.

Arboreal lichens are also a preferred winter food in old-growth forests. The presence or absence of lichens in the diet of these deer apparently reflects their availability to deer. In some areas (e.g., Vancouver Island) lichens have been reported as one of the major constituents in the diet of black-tailed deer (Bunnell 1979). Lichens provide large amounts of energy and may enhance the digestibility of other food items (Rochelle 1980). Lichens are a particularly important source of energy for deer during intermediate to heavy snow winters because they are available as litterfall on top of the snow. Habitat characteristics that favor production of lichens appear to be related to increasing age of the forest (Hanley et al. 1984, Stevenson and Rochelle 1984).

Old Growth Forests

The value of habitat for deer, under varying weather conditions, is directly related to the composition, structure, and productivity of vegetation on a site (Harestad 1985). During low snow conditions, when habitat

selection by deer is not significantly influenced by snow, deer will select those habitats that provide the best foraging opportunities. Under intermediate and deep snow conditions deer will select those habitats that provide for snow interception and food availability. The combination of a dense canopy with scattered openings in old-growth forests allows forage growth under openings while the canopy modifies snowfall sufficiently to promote forage availability and movement of deer. These characteristics are related to stands of old growth western hemlock (Tsuga heterophylla) and Sitka spruce (Picea sitchensis) with high volumes of timber (Hanley and Rose 1987; Kirchhoff and Schoen 1987). A corresponding preference has been demonstrated for these stands by deer with decreasing use in more open old growth stands with lower timber volumes (Rose 1982; Schoen et al. 1985) Old growth forested stands are assigned to volume classes ranging from forests without commercial value to high volume forests depending on the average net board-feet per acre in the stand (Table 2).

Increasing snow depths makes survival for Sitka black-tailed deer increasingly difficult during winter (Hanley 1984). Shallow snow depths (up to 4 in - 10 cm) cover preferred forage (evergreen forbs and half-shrubs) in open areas. Increasing snow depth (over 12 in - 30 cm) impede movements and/or increase the energetic cost of locomotion. Alternative food sources (i.e., shrubs) may be covered by a deep snow pack. Old-growth forests in southeast Alaska function to provide access to forage during periods of snow cover, thermal protection, and security or hiding places. Old-growth stands which are dominated by tall, large-diameter trees with large branches provide a multi-layered, relatively closed canopy which ameliorates these effects of snow cover by intercepting snowfall (Hanley and Rose 1987; Kirchhoff and Schoen 1987). These stands also support an understory of relatively abundant, high quality forage making them extremely valuable for deer (Hanley and McKendrich 1985). The combination of snow interception and the presence of a herbaceous and shrub understory ensures that forage will be available to deer in old-growth forests through all but the most severe winters.

NcNay and Doyle (1987) reported greater use of pole-sapling habitats than old growth habitats by radio-collared deer during winter on southern Vancouver Island. However, mild winters persisted throughout their study and the influence of winter weather on deer was probably insignificant (NcNay and Doyle 1987:16). The deer observed during this study chose pole-sapling habitats during winter for reasons that do not necessarily relate to selection of habitats during more severe winter weather. These deer represent a segment of the population that is potentially vulnerable to excessive mortality during severe winters (NcNay and Doyle 1987:35).

A study of habitat use by Sitka black-tailed deer in southern southeast Alaska was also conducted during a series of mild winters (Yeo and Peek in prep). Habitats preferred by deer during this study included young clearcuts (i.e., 10-15 years old) and high volume, old growth forest; seral forests were avoided.

Successional Stages

Structure and composition of vegetation show a predictable response following severe disturbance in a stand. Studies by Alaback (1982a, 1982b, 1984) on highly productive sites have shown growth responses of shrubby and herbaceous vegetation immediately following clearcutting. The first 10 years after logging show a dramatic increase in the production of plants which are primary food of deer in the winter. The greatest value of clearcut stands occurs during mild winters when the forage is available to deer. However, this forage becomes less available during moderate winters and is unavailable during severe winters (Bloom 1978). Research findings indicate that forage species growing under the canopy of old-growth forests are more palatable to and nutritious for deer in southeast Alaska than the same species in clearcuts (Billings and Wheeler 1979; Rose 1982; Hanley et al. 1987). Shrubs begin to dominate clearcuts after 10 years, reducing forbs and half-shrubs that are preferred by deer. After 20 years the tree overstory begins to close, decreasing the amount of light reaching the forest floor resulting in a rapid reduction of understory biomass (Alaback 1984). A dense, closed-canopy forest with limited forage production persists over the life of the timber rotation. An understory begins to develop again as stands reach 120 to 160 years of age. The value of these stands as deer habitat increases until about 250 to 300 years when old growth conditions, and preferred deer habitat, are achieved once again.

Hanley et al. (1989:45) summarized well the 4 major effects of clearcutting old growth forests that result in decreased carrying capacity of habitat for deer:

1) sun-grown plants in open clearcuts have lower digestible protein concentrations than do shade-grown plants in forests;

2) large amounts of logging slash increase energy costs of locomotion for deer and reduce the amount of useable habitat;

3) snow accumulates and persists to a much greater degree in open clearcuts that in forests; and

4) understory production is reduced to extremely low levels when the conifer canopy closes at about age 20 to 30 years and remains extremely low for at least the next 100 years.

The potential exists to extend the productivity for deer of 5 to 10 year old clearcuts for another 10 years by precommercial thinning of those stands at age 10 to 15 years (Kessler 1982, 1984, Nyberg et al. 1986). More use of precommercially thinned stands by deer than unthinned stands has been reported (Doerr and Sandburg 1986). Treatment of slash (e.g., piling) is required following thinning to ensure that deer movement through the thinned stands is not impeded and that the increased forage is available to them (Hanley 1984). Parker et al. (1984) have demonstrated that when debris (such as that accumulated after thinning) exceeds 50 percent of brisket height the effort that deer must make to move through it increases dramatically. This depth is approximately 10 inches (25 cm) for Sitka black-tailed deer (Hanley 1984). Mankowski and Peek (1989) reported that deer avoided sites with slash over 12 inches (30 cm) deep. Deer avoided 3 pre-commercially thinned sites evaluated during their study apparently because of high levels of slash.

Aspect and Elevation

Southerly aspects are exposed to much more potential solar radiation than northerly aspects during the winter in southeast Alaska (Hanley 1984). More forage is available to deer on south aspects because snow melts faster than on north aspects. Deer are also better able to conserve body heat when they are on south aspects. In response to these factors slopes with southerly aspects are more valuable to deer in the fall, winter, and spring than slopes with northerly aspects (Hanley 1984, Rose 1984).

Approximately 75 percent of the deer studied by Schoen and Kirchhoff (1985) migrated from low elevation winter ranges to summer ranges in alpine areas. The remaining 25 percent stayed in low elevation habitats throughout the year. The migrant deer tend to spend the winter at as high an elevation as snow conditions will allow. Schoen and Kirchhoff (1985) reported a mean elevation of 720 feet (220 m) for wintering deer during a low snow winter and 450 feet (136 m) during a deep snow winter. Forested winter range at lower elevations is, therefore, move valuable to deer than similar habitats at higher elevations where snow makes forage unavailable and movement difficult (Schoen and Kirchhoff 1990).

Habitat Model

Coefficients were assigned to habitats in southeast Alaska as an index of their value to Sitka black-tailed deer during the winter based on these documented habitat use patterns (Tables 3 through 6). Values were assigned to old-growth western Hemlock/Sitka spruce forest (by volume class), non-commercial forest, clearcuts (0-25 years old), and second-growth forest (>25 years old) based on the work of Schoen et al. (1985). Their ranking of habitats were applied as reported, with one exception. Western

hemlock/Sitka spruce, 20-30,000 board feet volume class, was considered more valuable during low snow conditions than the >30,000 board feet volume class. The rationale was that the snow interception capabilities of the higher volume class were not as significant to deer use during low snow conditions and that the more open, 20-30,000 board feet stands would have more forage production available to the deer.

Western hemlock/cedar (Alaska and Western red) forests were considered to provide the same habitat capability as western hemlock/Sitka spruce, 20-30,000 board feet class in terms of snow interception ability and forage production, so they were given equal value. Old-growth, Sitka spruce, riparian forests do not receive significant use by deer during the winter because forage production is limited and they tend to occur in cold-air drainages (Schoen et al. 1981). Their values are less than other old growth stands for this reason. Upland forests of old growth Sitka spruce were assummed to have a habitat structure similar to high-volume, old growth, western hemlock-Sitka spruce forests and received equal values.

Deciduous riparian forests have little value to deer during the winter because of their inability to intercept snow and limited forage production. Nonforest (e.g., muskeg), mountain hemlock (_Tsuga mertensiana_), and alpine communities are assumed to not have any value as winter range for deer because of snow accumulations and lack of forage. These vegetative communities are included in the "other" category (Tables 3 through 6).

Southerly aspects (i.e., 136° to 225°) provide the best potential for winter deer habitat. Coefficients for other aspects were based on values for south aspects. Reductions in the coefficients for other aspects reflected greater snow accumulations and colder conditions. North aspects (i.e., 316° to 45°) were reduced 40 percent. East aspects (i.e., 46° to 135°) were reduced 20 percent. West aspects (i.e., 226° to 315°) were reduced 10 percent. Sites without measurable slope and aspect (i.e., slope $\leq 5^{\circ}$) are considered as having a north aspect.

Habitats below 800 feet (244 m) have the highest capability for supporting deer. Coefficients for other elevations were based on values for low elevations. Reductions in coefficients for higher elevations reflected greater snow accumulations. Habitat coefficients from 800 feet to 1500 feet (244 m to 460 m) were reduced 40 percent under low and intermediate snow conditions on south, east, and west aspects. Under deep snow conditions, coefficients were reduced 70 percent for this elevation range. Coefficients for elevations above 1500 feet (460 m) were assigned a value of 0. Habitats from 800 feet to 1200 feet (244 m to 365 m) on north aspects were reduced 40 percent under low and

intermediate snow conditions. Under deep snow conditions, coefficients were reduced 70 percent for this elevation range on north slopes. Elevations above 1200 feet (244 m) on north slopes were assigned a value of 0.

Habitat Capability Density

Differences in the carrying capacity of winter range for deer in southeast Alaska projected by this model are related to the availability and quality of forage. Availability of forage to deer is related to production of forage in the habitat and how much forage is covered by snow. Productive habitats under low snow conditions will support higher numbers of deer than less productive habitats or similar habitats under deep snow conditions. Estimates of potential population densities of deer were made from professional experience and the limited literature from southeast Alaska (e.g., Barrett 1979). Under low snow, intermediate snow, and deep snow situations deer carrying capacity is assumed to be 100 deer per mi^2 (0.39 deer per ha), 80 deer per mi^2 (0.31 deer per hectare), and 70 deer per mi^2 (0.27 deer per ha) respectively for the habitats with the highest coefficients.

Predation

Predation can act as a significant controlling factor on deer populations (Keith 1974). This is especially true in those areas of southeast Alaska where grey wolves (Canis lupus) are present (Van Ballenberghe and Hanley 1984). Deer populations declined in Game Management Unit 3 from high densities to the lowest densities in southeast Alaska during the period 1968 to 1974 (Smith et al. 1986). The initial decline was due to severe winter weather with wolf populations limiting recovery of the deer population. This indicates a strong interaction between winter severity and the overall effect of wolf predation on deer. Predation on fawns by black bears may also be limiting deer numbers in this area. Data presented in Nelson and Mech (1981) indicate that the annual mortality of deer as a result of predation by grey wolves was approximately 15 percent for fawns and 18 percent for adults in northeast Minnesota. Fuller (1990) reported that wolf predation accounted for 10 percent of all deer mortalities in north-central Minnesota. Mech et al. (1971) reported that as snow accumulations increased in northern Minnesota deer became more vulnerable to wolf predation. Although predation rates on deer by grey wolves and black bears are not known in southeast Alaska, it is assumed that deer populations will be reduced by 30 percent where these predators occur under deep snow conditions, 20 percent under intermediate snow conditions, and 10 percent under low snow conditions (Tables 5 and 6).

Potential Harvest

Habitat capability models are designed to estimate the maximum number or biomass of a species an area of land can support on a sustained basis based on habitat conditions (i.e., K) (USDA Forest Service 1984). To ensure that populations of Sitka black-tailed deer addressed in this model will support recreation and subsistence hunting it is assumed that the populations are approaching, but not at K (i.e., 90 percent of K). McCullough (1987) predicted that a residual population of mule deer at 90 percent of K would provide a sustainable harvest of approximately 10 percent of the population. Computer simulations of populations of Sitka black-tailed deer indicate that a residual population near K would provide a sustainable of about 9 percent of the population (Flynn and Suring 1989). The assumption is made, therefore, that populations of deer projected by this model will support a long-term harvest of 10 percent of the herd. Actual populations of Sitka black-tailed deer may vary over the short term and due to factors not addressed in this model. Harvest associated with actual populations may vary from 10 percent because the population is either significantly below or above K.

Minimum Habitat Area

Minimum habitat area is defined as the minimum area of contiguous habitat that can support a wintering deer population on a reasonably long-term basis. This parameter has not been addressed in studies of deer and their habitat in southeast Alaska. However, it is reasonable to assume that as patch sizes of preferred winter habitats (i.e., high volume, old growth forests) increase their suitability as habitat increases. This is consistent with the principles of the theory of island biogeography (Brown and Gibson 1983, Harris 1984) and is supported by data on mule deer (Picton and Mackie 1980) and other large mammals (Picton 1979b). It has also been observed that as large blocks of preferred habitat (i.e., high volume, old growth forest) are fragmented to small patches through clearcutting deer will concentrate in these patches and over utilize preferred forage species, lowering the capability of the patch to support deer (Alverson et al. 1988, Yeo and Peek in prep.).

Fragmentation of deer winter range into isolated patches of old growth will concentrate deer in predictable areas, reducing predator search time. This hypothesis has been advanced by researchers in British Columbia and southeast Alaska (Herbert 1982, VanBallenberghe and Hanley 1984, Smith et al. 1986). Beier and McCullough (1990) also indicated that maintaining a large block of habitat will provide better protection from predators than breaking the habitat up into small patches. Bunnell and Jones (1984) suggested that vulnerability of deer to predation increased as size of habitat patches decreased below 200 acres (80 ha).

Following these observations it is assumed, for this model, that contiguous patches of old growth forest habitat (i.e.,

volume class 4+) 1,000 acres (400 ha) or larger provide optimum conditions for deer (Figure 1). Habitat capability of very small patches is reduced by 70 percent. A linear relationship is assumed between the two extremes. Although it is not expressed quantitatively in this model, large contiguous habitat patches are more valuable to deer than long stringers of habitat that are connected even though the same area of forest habitat may be present.

The minimum area factor is to be applied after the habitat capability values of old growth stands have been determined (i.e., from Tables 3 through 6). Habitat capability values determined for a stand are retained if the stand is part of a 1,000+ acre (400+ ha) block of habitat. If the stand is isolated or is associated with a habitat block that is less than 1,000 acres (400 ha) the habitat capability value is reduced according to the relationship established here (Figure 1).

Sensitivity Analysis

An analysis of the sensitivity of the model was conducted to determine the responsiveness of the model to changes in the value of the variables. Each of the variables in the model were modified while the other variables were held constant. Variable values associated with lowest and highest habitat capability were used. The resulting estimate of habitat capability from each run of the model was recorded and the percentage of change determined (Table 7). A high percentage of change indicates the variable has a high potential to affect the estimate of habitat capability. Conversely, a low percentage of change indicates that changes in the variable do not result in large differences in the estimates of habitat capability.

The successional stage (i.e., clearcut, second growth, old growth) and snow depth variables have the greatest effect on estimates of habitat capability for deer (Table 7). Elevation, overstory species, aspect, and volume class variables have an intermediate influence on the estimates. Presence or absence of predators (e.g., grey wolves) has a limited effect. Riparian vs upland habitats has the least relative influence on estimates of habitat capability,

Verification

This draft of the model has received thorough review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

This model and the associated computer program have been verified through use of the Geographic Information System (GIS) database available for the Tongass National Forest in southeast Alaska. The purpose of this verification process was to ensure that the model provides reasonable results on a test area. Verification of the minimum habitat area

parameter has been delayed until the GIS can be programmed for its implementation.

Once these aspects of verification are completed, reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Annual snowfall statistics for selected southeast Alaska locations after regression predictions have been substituted for missing data.[a]

Location	Sample Size	Mean Annual Snowfall (inches)	SD[c]	CV[d]	% of Years in Snowfall Category (inches)[b]		
					<51	51-115	>115
Baranof	72	250	37	15	0	0	100
Yakutat	38	210	78	37	0	5	95
Little Port Walter	72	129	51	38	4	35	61
Elfin Cove	72	114	34	15	0	51	49
Pelican	72	112	41	37	6	48	46
Glacier Bay	72	109	41	37	6	56	39
Tenakee Springs	72	101	69	69	26	33	40
Juneau airport	72	99	43	43	14	49	37
Petersburg	72	99	48	49	14	51	35
Hoonah	72	98	37	38	11	56	33
Juneau town	72	90	41	45	18	54	28
Angoon	72	66	19	29	21	78	1
Wrangell	72	60	34	56	43	50	7
Sitka magnetic	72	51	21	42	49	47	4
Annette	72	50	27	54	54	43	3
Ketchikan	72	37	26	70	83	14	3

[a]Based on US Department of Commerce National Oceanic and Atmospheric Administration records published in Climatalogical Data by the National Climatic Data Center, Asheville, NC (from Flynn and Kirchhoff in prep.).

[b]Snowfall recorded in inches as cumulative totals for the winter season.

[c]Standard deviation

[d]Coefficient of variation

Table 2. Classes of timber volume on the Tongass National Forest, southeast Alaska.

Class Description	Range of Timber Volumes
Noncommercial forest	0 - 8,000 boardfeet/acre
Low-volume old growth (Strata A)	8 - 20,000 boardfeet/acre
Mid-volume old growth (Strata B)	20 - 30,000 boardfeet/acre
High-volume old growth (Strata C & D)	30,000 + boardfeet/acre

Table 3. Capability of winter habitats, on south and north aspects, without predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska.

Habitat	Physiographic Features											
	South Aspect						North Aspect					
	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Old Growth												
Hemlock-spruce, hemlock												
Low-volume												
Low	0.70	70	0.42	42	0.00	0	0.42	42	0.25	25	0.00	0
Intermediate	0.40	40	0.24	24	0.00	0	0.24	24	0.14	14	0.00	0
Deep	0.20	20	0.06	6	0.00	0	0.12	12	0.04	04	0.00	0
Mid-volume												
Low	1.00	100	0.60	60	0.00	0	0.60	60	0.36	36	0.00	0
Intermediate	0.60	60	0.36	36	0.00	0	0.36	36	0.22	22	0.00	0
Deep	0.40	40	0.12	14	0.00	0	0.24	24	0.07	7	0.00	0
High-volume												
Low	0.90	90	0.54	54	0.00	0	0.54	54	0.32	32	0.00	0
Intermediate	0.80	80	0.48	48	0.00	0	0.48	48	0.29	29	0.00	0
Deep	0.70	70	0.21	21	0.00	0	0.42	42	0.13	13	0.00	0
Hemlock-cedar												
Low	1.00	100	0.60	60	0.00	0	0.60	60	0.36	36	0.00	0
Intermediate	0.60	60	0.36	36	0.00	0	0.36	36	0.22	22	0.00	0
Deep	0.40	40	0.12	12	0.00	0	0.24	24	0.07	7	0.00	0
Spruce												
Riparian												
Low	0.35	35	0.21	21	0.00	0	0.21	21	0.13	13	0.00	0
Intermediate	0.24	24	0.13	13	0.00	0	0.14	14	0.08	8	0.00	0
Deep	0.13	13	0.04	4	0.00	0	0.08	8	0.02	2	0.00	0

Table 3. Capability of winter habitats, on south and north aspects, without predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska - continued.

	Physiographic Features											
	South Aspect						North Aspect					
Habitat	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Spruce												
Upland												
Low	0.90	90	0.54	54	0.00	0	0.54	54	0.32	32	0.00	0
Intermediate	0.80	80	0.48	48	0.00	0	0.48	48	0.29	29	0.00	0
Deep	0.70	70	0.21	21	0.00	0	0.42	42	0.13	13	0.00	0
Noncommercial forest												
Low	0.35	35	0.21	21	0.00	0	0.21	21	0.13	13	0.00	0
Intermediate	0.21	21	0.13	13	0.00	0	0.13	13	0.08	8	0.00	0
Deep	0.08	8	0.02	2	0.00	0	0.05	5	0.02	2	0.00	0
Second growth (25-150 years)												
Low	0.11	11	0.07	7	0.00	0	0.07	7	0.04	4	0.00	0
Intermediate	0.08	8	0.05	5	0.00	0	0.05	5	0.03	3	0.00	0
Deep	0.05	5	0.02	2	0.00	0	0.03	3	0.01	1	0.00	0
Clearcut (0-25 years)												
Low	0.50	50	0.30	30	0.00	0	0.30	30	0.18	18	0.00	0
Intermediate	0.24	24	0.14	14	0.00	0	0.14	14	0.08	8	0.00	0
Deep	0.08	8	0.02	2	0.00	0	0.05	5	0.02	2	0.00	0
Thinned clearcut												
Low	0.65	65	0.39	39	0.00	0	0.39	39	0.23	23	0.00	0
Intermediate	0.30	30	0.18	18	0.00	0	0.18	18	0.11	11	0.00	0
Deep	0.08	8	0.02	2	0.00	0	0.05	5	0.02	2	0.00	0
Other	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table 4. Capability of winter habitats, on east and west aspects, without predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska.

Habitat	Physiographic Features											
	East Aspect						West Aspect					
	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Old Growth												
Hemlock-spruce, hemlock												
Low-volume												
Low	0.56	56	0.34	34	0.00	0	0.63	63	0.38	38	0.00	0
Intermediate	0.32	32	0.19	19	0.00	0	0.36	36	0.22	22	0.00	0
Deep	0.16	16	0.05	5	0.00	0	0.18	18	0.05	5	0.00	0
Mid-volume												
Low	0.80	80	0.48	48	0.00	0	0.90	90	0.54	54	0.00	0
Intermediate	0.48	48	0.29	29	0.00	0	0.54	54	0.32	32	0.00	0
Deep	0.32	32	0.10	10	0.00	0	0.36	36	0.11	11	0.00	0
High-volume												
Low	0.72	72	0.43	43	0.00	0	0.81	81	0.49	49	0.00	0
Intermediate	0.64	64	0.48	48	0.00	0	0.72	72	0.43	43	0.00	0
Deep	0.56	56	0.17	17	0.00	0	0.63	63	0.19	19	0.00	0
Hemlock-cedar												
Low	0.80	80	0.48	48	0.00	0	0.90	90	0.54	54	0.00	0
Intermediate	0.48	48	0.29	29	0.00	0	0.54	54	0.32	32	0.00	0
Deep	0.32	32	0.10	10	0.00	0	0.36	36	0.11	11	0.00	0
Spruce												
Riparian												
Low	0.28	28	0.17	17	0.00	0	0.32	32	0.19	19	0.00	0
Intermediate	0.19	19	0.09	9	0.00	0	0.22	22	0.10	10	0.00	0
Deep	0.10	10	0.03	3	0.00	0	0.11	12	0.04	4	0.00	0

Table 4. Capability of winter habitats, on east and west aspects, without predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska - continued.

	Physiographic Features											
	East Aspect						West Aspect					
Habitat	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Spruce												
Upland												
Low	0.72	72	0.43	43	0.00	0	0.81	81	0.49	49	0.00	0
Intermediate	0.64	64	0.38	38	0.00	0	0.72	72	0.43	43	0.00	0
Deep	0.56	56	0.17	17	0.00	0	0.63	63	0.19	19	0.00	0
Noncommercial forest												
Low	0.28	28	0.17	17	0.00	0	0.32	32	0.19	19	0.00	0
Intermediate	0.17	17	0.10	10	0.00	0	0.19	19	0.11	11	0.00	0
Deep	0.06	6	0.02	2	0.00	0	0.07	7	0.02	2	0.00	0
Second growth (25-150 years)												
Low	0.09	9	0.05	5	0.00	0	0.10	10	0.06	6	0.00	0
Intermediate	0.06	6	0.04	4	0.00	0	0.07	7	0.04	4	0.00	0
Deep	0.04	4	0.01	1	0.00	0	0.05	5	0.02	2	0.00	0
Clearcut (0-25 years)												
Low	0.40	40	0.24	24	0.00	0	0.45	45	0.27	27	0.00	0
Intermediate	0.19	19	0.11	11	0.00	0	0.22	22	0.13	13	0.00	0
Deep	0.06	6	0.02	2	0.00	0	0.07	7	0.02	2	0.00	0
Thinned clearcut												
Low	0.52	52	0.31	31	0.00	0	0.59	59	0.35	35	0.00	0
Intermediate	0.24	24	0.14	14	0.00	0	0.27	27	0.16	16	0.00	0
Deep	0.06	6	0.02	2	0.00	0	0.07	7	0.02	2	0.00	0
Other	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table 5. Capability of winter habitats, on south and north aspects, with predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska.

Habitat	Physiographic Features											
	South Aspect						North Aspect					
	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Old Growth												
Hemlock-spruce, hemlock												
Low-volume												
Low	0.63	63	0.38	38	0.00	0	0.38	38	0.23	23	0.00	0
Intermediate	0.33	33	0.19	19	0.00	0	0.19	19	0.11	11	0.00	0
Deep	0.14	14	0.04	4	0.00	0	0.08	8	0.03	03	0.00	0
Mid-volume												
Low	0.90	90	0.54	54	0.00	0	0.54	54	0.32	32	0.00	0
Intermediate	0.48	48	0.29	29	0.00	0	0.29	29	0.18	18	0.00	0
Deep	0.28	28	0.08	8	0.00	0	0.17	17	0.05	5	0.00	0
High-volume												
Low	0.81	81	0.49	49	0.00	0	0.49	49	0.29	29	0.00	0
Intermediate	0.64	64	0.38	38	0.00	0	0.38	38	0.23	23	0.00	0
Deep	0.49	49	0.15	15	0.00	0	0.29	29	0.09	9	0.00	0
Hemlock-cedar												
Low	0.90	90	0.54	54	0.00	0	0.54	54	0.32	32	0.00	0
Intermediate	0.48	48	0.29	29	0.00	0	0.29	29	0.18	18	0.00	0
Deep	0.28	28	0.08	8	0.00	0	0.17	17	0.05	5	0.00	0
Spruce												
Riparian												
Low	0.32	32	0.19	19	0.00	0	0.19	19	0.12	12	0.00	0
Intermediate	0.19	19	0.10	10	0.00	0	0.11	11	0.06	6	0.00	0
Deep	0.09	9	0.03	3	0.00	0	0.06	6	0.01	1	0.00	0

Table 5. Capability of winter habitats, on south and north aspects, with predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska - continued.

Habitat	Physiographic Features											
	South Aspect						North Aspect					
	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Spruce												
Upland												
Low	0.81	81	0.49	49	0.00	0	0.49	49	0.29	29	0.00	0
Intermediate	0.64	64	0.38	38	0.00	0	0.38	38	0.23	23	0.00	0
Deep	0.49	49	0.15	15	0.00	0	0.29	29	0.09	9	0.00	0
Noncommercial forest												
Low	0.32	32	0.19	19	0.00	0	0.19	19	0.12	12	0.00	0
Intermediate	0.17	17	0.10	10	0.00	0	0.10	10	0.06	6	0.00	0
Deep	0.06	6	0.01	1	0.00	0	0.04	4	0.01	1	0.00	0
Second growth (25-150 years)												
Low	0.10	10	0.06	6	0.00	0	0.06	6	0.04	4	0.00	0
Intermediate	0.06	6	0.04	4	0.00	0	0.04	4	0.02	2	0.00	0
Deep	0.04	4	0.01	1	0.00	0	0.02	2	0.01	1	0.00	0
Clearcut (0-25 years)												
Low	0.45	45	0.27	27	0.00	0	0.27	27	0.16	16	0.00	0
Intermediate	0.19	19	0.11	11	0.00	0	0.11	11	0.06	6	0.00	0
Deep	0.06	6	0.01	1	0.00	0	0.04	4	0.01	1	0.00	0
Thinned clearcut												
Low	0.59	59	0.35	35	0.00	0	0.35	35	0.21	21	0.00	0
Intermediate	0.24	24	0.14	14	0.00	0	0.14	14	0.09	9	0.00	0
Deep	0.06	6	0.01	1	0.00	0	0.04	4	0.01	1	0.00	0
Other	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table 6. Capability of winter habitats, on east and west aspects, with predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska.

Habitat	Physiographic Features											
	East Aspect						West Aspect					
	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet		>1200 feet	
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Old Growth												
Hemlock-spruce, hemlock												
Low-volume												
Low	0.50	50	0.31	31	0.00	0	0.55	55	0.34	34	0.00	0
Intermediate	0.26	26	0.15	15	0.00	0	0.29	29	0.18	18	0.00	0
Deep	0.11	11	0.04	4	0.00	0	0.13	13	0.04	4	0.00	0
Mid-volume												
Low	0.72	72	0.43	43	0.00	0	0.81	81	0.49	49	0.00	0
Intermediate	0.38	38	0.23	23	0.00	0	0.43	43	0.26	26	0.00	0
Deep	0.22	22	0.07	7	0.00	0	0.25	25	0.08	8	0.00	0
High-volume												
Low	0.65	65	0.39	39	0.00	0	0.73	73	0.44	44	0.00	0
Intermediate	0.51	51	0.38	38	0.00	0	0.58	58	0.35	35	0.00	0
Deep	0.39	39	0.12	12	0.00	0	0.44	44	0.13	13	0.00	0
Hemlock-cedar												
Low	0.72	72	0.43	43	0.00	0	0.81	81	0.49	49	0.00	0
Intermediate	0.38	38	0.23	23	0.00	0	0.43	43	0.26	26	0.00	0
Deep	0.22	22	0.07	7	0.00	0	0.25	25	0.08	8	0.00	0
Spruce												
Riparian												
Low	0.25	25	0.15	15	0.00	0	0.29	29	0.17	17	0.00	0
Intermediate	0.15	15	0.07	7	0.00	0	0.18	18	0.08	8	0.00	0
Deep	0.07	7	0.02	2	0.00	0	0.08	8	0.03	3	0.00	0

Table 6. Capability of winter habitats, on east and west aspects, with predators, to support Sitka black-tailed deer under varing snow conditions in southeast Alaska - continued.

	Physiographic Features											
	East Aspect						West Aspect					
Habitat	<800 feet		800-1500 feet		>1500 feet		<800 feet		800-1200 feet			
>1200 feet												
Snow Level	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Spruce												
Upland												
Low	0.65	65	0.39	39	0.00	0	0.73	73	0.44	44	0.00	0
Intermediate	0.51	51	0.30	30	0.00	0	0.58	58	0.34	34	0.00	0
Deep	0.39	39	0.12	12	0.00	0	0.44	44	0.13	13	0.00	0
Noncommercial forest												
Low	0.25	25	0.15	15	0.00	0	0.29	29	0.17	17	0.00	0
Intermediate	0.14	14	0.08	8	0.00	0	0.15	15	0.09	9	0.00	0
Deep	0.04	4	0.01	1	0.00	0	0.05	5	0.01	1	0.00	0
Second growth (25-150 years)												
Low	0.08	8	0.05	5	0.00	0	0.09	9	0.05	5	0.00	0
Intermediate	0.05	5	0.03	3	0.00	0	0.06	6	0.03	3	0.00	0
Deep	0.03	3	0.01	1	0.00	0	0.04	4	0.01	1	0.00	0
Clearcut (0-25 years)												
Low	0.36	36	0.22	22	0.00	0	0.41	41	0.24	24	0.00	0
Intermediate	0.15	15	0.09	9	0.00	0	0.18	18	0.10	10	0.00	0
Deep	0.04	4	0.01	1	0.00	0	0.05	5	0.01	1	0.00	0
Thinned clearcut												
Low	0.47	47	0.28	28	0.00	0	0.53	53	0.32	32	0.00	0
Intermediate	0.19	19	0.11	11	0.00	0	0.22	22	0.13	13	0.00	0
Deep	0.04	4	0.01	1	0.00	0	0.05	5	0.01	1	0.00	0
Other	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0

Table 7. Analysis of the sensitivity of variables included in the habitat capability model for Sitka black-tailed deer in southeast Alaska.[a]

Variable (Name in Database)	Value of Variable[b] High	Value of Variable[b] Low	Results: High Value Population	Results: High Value Mean Index	Results: Low Value Population	Results: Low Value Mean Index	% Change
Successional stage (SSIZEC)	4	2	3295.0	0.18	669.1	0.04	80
Snow depth (SNOW)	1	3	5674.9	0.31	1719.8	0.09	70
Elevation (ELEV-RNG)	1	4	4857.7	0.26	2317.0	0.12	52
Overstory species (FTYPE)	X	P	3485.4	0.19	1801.6	0.10	48
Aspect (ASPECT)	2	4	4302.1	0.23	2374.0	0.13	45
Volume class (VOLC)	6	4	4802.6	0.26	2821.0	0.15	41
Predators (CALU)	0	1	3419.8	0.18	2741.1	0.15	20
Riparian (FISH-HAB)	0	71	3512.0	0.19	3337.4	0.18	5

[a]The Kadashan quadrangle was used for this analysis because the data set is complete for the whole quadrangle (e.g., complete soil surveys). Total land surface of the quadrangle is 118,776 acres. Unmodified habitat capability is 3419.8 deer; mean habitat capability index is 0.18.

[b]Successional stage: 4 = old growth, 2 = poletimber

Snow depth: 1 = 0 to 50 inches, 3 = 116 to 200 inches

Elevation: 1 = 0 to 500 feet, 4 = 1201 to 1500 feet

Overstory species: X = hemlock/spruce, P = black cottonwood

Volume class: 6 = 30000 to 50000 boardfeet per acre
4 = 8000 to 20000 boardfeet per acre

Aspect: 2 = 136^{o} to 225^{o} (i.e., south)
4 = 0^{o} to 45^{o}, 316^{o} to 360^{o} (i.e., north)

Predators: 0 = gray wolves absent, 1 = gray wolves present

Riparian: 0 = not riparian, 71 = riparian

Table 8. Information required from the Geographic Information System to model habitat capability for Sitka black-tailed deer in southeast Alaska.

Map Layer / Components	Description
Forested/nonforested	Forest land has at least 10% stocking by trees of any size
Productive/unproductive	Forest land capable of producing more than 1.4 m^3/ha annual growth of industrial wood
Successional stage	
Clearcut	Harvested within last 5 years or nonstocked because of harvest
Seedling/sapling	0 to 13 cm diameter at breast height (DBH)
Pole timber	13 to 28 cm DBH
Young growth sawtimber	28+ cm DBH and less than 150 years old
Old growth	28+ cm DBH and 150+ years old
Timber volume class	<47 m^3 per ha 47-117 m^3 per ha 117-175 m^3 per ha 175-292 m^3 per ha >292 m^3 per ha
Forest type	Western hemlock Sitka spruce Western hemlock/Sitka spruce Western hemlock/western red cedar or Alaska cedar Western red cedar or Alaska cedar Shore pine Red alder Black cottonwood
Stream channel type	
Soil polygons	
Riparian	

Table 8. Information required from the Geographic Information System to model habitat capability for Sitka black-tailed deer in southeast Alaska - continued.

Map Layer / Components	Description	
Elevation	0 - 150 m	
	151 - 245 m	
	246 - 365 m	
	366 - 460 m	
	461 - 610 m	
	610+ m	
Aspect	0 - 45 degrees	
	46 - 135 degrees	
	136 - 225 degrees	
	226 - 315 degrees	
	316 - 369 degrees	
	None (i.e., flat)	
Value Comparison Unit		
Annual snow depth	Low	0 - 130 cm
	Intermediate	131 - 290 cm
	Deep	291 - 510 cm
	Very Deep	511+ cm
Predators (gray wolves)	Presence	
	Absence	

HABITAT CAPABILITY MODEL FOR RIVER OTTER IN SOUTHEAST ALASKA: SPRING HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of river otter (Lutra canadensis). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Habitat capability is determined for spring (May through July) because river otters make use of all occupied habitats at this time.

The historic range of the river otter includes the majority of the North American continent (Hall and Kelson 1959). Population declines and extripations of the river otter followed human settlement and associated habitat alteration and overharvest through trapping (Jenkins 1983). River otters still occur in 44 states and 11 Canadian provinces and territories (Deems and Pursley 1978). Other areas (e.g., Colorado) are attempting to reestablish populations of river otters. Populations of river otters are stable or may be increasing in Alaska (Endangered Species Scientific Authority 1978). Magoun and Valkenburg (1979) have reported a northward expansion of the range of river otters in Alaska. The river otter has been an important source of income for trappers throughout North America including Alaska. River otter harvests are increasing throughout Alaska with over 430 pelts taken in southeast Alaska in 1983-1984 (Townsend 1986).

Habitat Use Information

River otters have adapted to a range of habitats throughout North America but they are always closely associated with aquatic environments. Coastal habitats are especially productive because of the variety and abundance of food items available for river otters (Larsen 1984; Stenson et al. 1984). Habitat selection by river otters along the coastline in southeast Alaska appears to be related to the availability of food resources and adequate cover (Larsen 1983; Woolington 1984). Beaches characterized by convex shorelines, short intertidal lengths, and the presence of bedrock substrate were selected by otters in response to presence and availability of prey. Cottids, Scorpaenids, and Hexagrammids occurred most frequently in otter diets in southeast Alaska (Larsen 1984). These fish often occur in intertidal areas with fairly steep beaches which are often located adjacent to convex shorelines (Hart 1973). River otters hauling out on and crossing beaches with short intertidal lengths with rocky substrates are less exposed to potential predators than they would be on beaches with long intertidal lengths with a fine particulate substrate.

Although beach characteristics affected river otter use of habitats, river otters did not utilize beaches with preferred foraging characteristics when these areas were adjacent to clearcuts (Larsen 1983). Five to 20 year old clearcuts were used less than expected by river otters while forested habitats were used in proportion to availability. This was apparently due to dense shrub growth, extensive slash, and lack of an overstory canopy in clearcuts. River otters in southeast Alaska tended to select areas for use that were relatively free from extensive vegetative debris and dense shrub growth and with a canopy closure of >50 percent.

River otters in southeast Alaska made extensive use of natural cavities near (within 75 feet - 23 m) the beach as daytime resting sites (Larsen 1983). The burrows most often used were formed by the roots of conifer trees and decaying snags. Cavities under snags were used as burrows more often than any other structures. The mean diameter at breast height of all trees and snags associated with cavities used as burrows was 34 in (85 cm).

Throughout most of the year the majority of river otter activity occurs within 100 feet (30 m) of the shoreline (Larsen 1983; Woolington 1984). However, from May through July female river otters use inland habitats generally within 0.5 mi (0.8 km) of the coastline as natal denning sites (Woolington 1984). Natal dens occurred on well drained sites near streams in old-growth habitats. Stream courses were used as travel corridors between natal den sites and foraging areas on the coastline.

A proportion of river otters periodically move into inland habitats associated with streams and lakes (Home 1982; Larsen 1983; Woolington 1984). Otter apparently travel extensively throughout stream and lake systems utilizing areas with greatest food availability (Melquist and Hornocker 1983). Streams in southeast Alaska support populations of sculpins (Cottus spp.) which are the preferred food item of river otters in this area (McLarney 1968, Mason and Machidori 1975, Larsen 1984).

Habitat Model

Although availability of food directly affects use of habitats by river otters, adequate cover appears to be required before otters will extensively use an area. Characteristics associated with food availability in marine systems (e.g., convex shoreline, short intertidal zone) are not easily represented in habitat databases. For these reasons the emphasis in this model is placed on the cover and spatial relationships between river otters and their habitat, rather than food availability. This is recognized as a shortcoming of this model.

Coastal Habitats

Old-growth forests are assumed to provide optimum habitat for river otters (Table 1). This habitat encompasses the characteristics selected by river otters in southeast Alaska. These characteristics include >50 percent canopy cover, large diameter trees and snags, and availability of burrow and den sites. These characteristics start to become available in stands of sawtimber but adequate den and burrow sites are limited. Seedling and sapling (i.e., clearcut) and pole timber stands provide limited habitat for river otters. Adequate den and burrow sites are not available in these stands, slash accumulations limits mobility of river otters, and canopy cover is not extensive enough in clearcuts. Other vegetation communities are assumed not to have any value for river otters because of lack of cover and the absence of suitable burrow and den sites.

Use of coastal habitats by river otters was usually restricted to a 65 foot (20 m) fringe of forest during Larsen's (1983) study. Woolington (1984) reported 75 percent of radio locations of radio-equipped river otters occurred within 100 feet (30 m) of the shoreline with rapidly decreasing use as distance increased. These findings indicate that the 100 feet (30 m) fringe of forest adjacent to the coastline is optimum habitat for river otters (Table 1). Approximately 10 percent of total use occurred from 100 feet (30 m) to 500 feet (150 m) from the shoreline. This zone is assumed to encompass all coastal habitats used by river otters. Stands located greater than 500 feet (150 m) from mean high tide, other than riparian areas and natal denning sites, were assumed to not have any value as habitat for river otter.

Stream and Lake Habitat

Streams in southeast Alaska have been classified to characterize their potential as aquatic habitat. Streams that produce anadromous and resident fish (i.e., classes I and II) are assumed to be good foraging habitat for river otters (Table 1). Streams that do not support any fish (i.e., class III) are assumed not to have any foraging value for river otters. Lakes greater than 50 ac (20 ha) are assumed to support more prey for river otters and provide more foraging opportunities than smaller lakes.

Utilization of inland areas by river otters is strongly associated with streams, lakes, and their associated riparian habitats (Melquist and Hornocker 1983). Riparian habitats have been described on the Tongass National Forest on the basis of channel type, soil, land form, and vegetation (Martin et al. 1986). Use of inland areas by river otters is assumed to be restricted to these riparian areas (Table 1). The vegetation/successional stage relationships established for river otter in coastal habitats are assumed to also apply to riparian habitats.

Natal Denning Habitat

Natal dens located by Woolington (1984) ranged from 0.15 mi (0.25 km) to 0.5 mi (0.8 km) inland from saltwater. These sites were in well-drained riparian habitats or in the adjacent upland area (i.e., within 100 feet [30 m]). Information on specific elevation parameters already existed in the Geographic Information System (GIS) database and is easier to apply than distance buffers. For this reason an elevation value was substituted for the distance parameter (i.e., 0.5 mi [0.8 km]) described in Woolington's (1984) description of natal denning sites.

Old-growth forests, on well-drained soils, adjacent to streams, up to 800 feet (245 m) elevation are therefore considered optimum natal denning habitat for river otters (Table 1). Forested stands from 800 feet (245 m) to 1200 feet (365 m) elevation have limited value as natal denning sites. Stands more than 1200 feet (365 m) elevation are not considered natal denning habitat even when they are adjacent to streams. Natal dens were only found in old-growth stands so the vegetation/successional relationships established for the beach fringe habitat were assumed to also apply here.

Habitat Capability

Densities of river otters in southeast Alaska have been estimated to be 1 river otter per 1.28 mi (2.06 km) of coastline (Home 1982), 1 river otter per 1.24 mile (2.00 km) (Larsen 1983), and 1 river otter per 0.73 mile (1.18 km) (Woolington 1985). The mean of these 3 estimates is 1 river otter per 1.08 mi (1.75 km) or approximately 1 river otter per 1 mile (1.61 km) of coastal shoreline. The following calculations provide an estimate of the area of river otter habitat per linear measurement of coastline.

$$\frac{\text{5280 feet (1 mile) x 500 feet (beach fringe)}}{\text{43560 feet}^2\text{/ac}} = \text{60 ac/mi of beach fringe}$$

Five hundred feet (150 m) is used as the depth of beach fringe because most river otter use occurs within this zone.

$$\text{1 river otter per mile of coastline} = \text{1 river otter/60 ac} = \text{0.02 river otter/ac} = \text{13 river otter/mi}^2.$$

An even (i.e., 1:1) sex ratio has been assumed for river otters (Toweill and Taber 1982). This indicates an estimate of 6.5 female river otter/mi^2.

The reported proportion of female river otters breeding annually varies. The average proportion from 3 studies suggests that approximately 85 percent of female river

otters breed each year (Tabor and Wight 1977; Lauhachinda 1978; Mowbray et al. 1979).

0.85 x 6.5 female river otter/mi^2 = 5.5 female river otters/mi^2 of natal denning habitat.

It is assumed that 20 percent of the remaining 7.5 river otters/mi^2 are utilizing inland aquatic and riparian habitats during spring.

0.20 x 7.5 river otter/mi^2 = 1.5 river otter/mi^2 of inland aquatic and riparian habitat.

7.5 river otter/mi^2 beach fringe habitat - 1.5 river otter/mi^2 using inland aquatic and riparian habitat = 6 river otter/mi^2 remaining in beach fringe habitats during spring.

These calculations provide the following springtime estimates of river otter population densities in optimum habitats (i.e., suitability index = 1.0):

Marine coastal habitat	= 6 river otter/mi^2
Natal denning habitat	= 5.5 river otter/mi^2
Inland aquatic/ riparian habitat	= 1.5 river otter/mi^2

Unsuitable habitat (i.e., suitability index = 0.0) is assumed to have a density of 0 river otter/mi^2. A linear relationship is assumed between river otter densities and habitat quality, as defined by index values, in order to calculate densities for intermediate index values (Table 1).

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the GIS database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on river otters. This will be done to ensure the model results approximate the results of field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Capability of habitats to support spring populations of river otters in southeast Alaska.

	Distance From Saltwater									
	<500 ft		>500 ft							
Habitat	Index	# sq mi	Riparian							
Volume Class			Elevation							
Food			<800 ft		800-1200 ft		>1200 ft		Not Riparian	
Production			Index	# sq mi	Index	# sq mi	Index	# sq mi	Index	# sq mi
Old-growth forest										
Volume class 4+	1.0	6.0							0.0	0.0
Stream-class I & II[a]			1.0	6.0	0.3	1.8	0.0	0.0		
-class III			0.0	0.0	0.0	0.0	0.0	0.0		
Lake -<50 ac			0.3	1.8	0.1	0.6	0.0	0.0		
->50 ac			0.8	4.8	0.2	1.2	0.0	0.0		
Noncommercial	0.1	0.6							0.0	0.0
Stream-class I & II			0.1	0.6	0.0	0.0	0.0	0.0		
-class III			0.0	0.0	0.0	0.0	0.0	0.0		
Lake -<50 ac			0.0	0.0	0.0	0.0	0.0	0.0		
->50 ac			0.1	0.6	0.0	0.0	0.0	0.0		
Clearcut	0.1	0.6								
Stream-class I & II			0.1	0.6	0.0	0.0	0.0	0.0		
-class III			0.0	0.0	0.0	0.0	0.0	0.0		
Lake -<50 ac			0.0	0.0	0.0	0.0	0.0	0.0		
->50 ac			0.1	0.6	0.0	0.0	0.0	0.0		
Pole timber	0.1	0.6							0.0	0.0
Stream-class I & II			0.1	0.6	0.0	0.0	0.0	0.0		
-class III			0.0	0.0	0.0	0.0	0.0	0.0		
Lake -<50 ac			0.0	0.0	0.0	0.0	0.0	0.0		
->50 ac			0.1	0.6	0.0	0.0	0.0	0.0		
Young growth sawtimber	0.3	1.8							0.0	0.0
Stream-class I & II			0.3	1.8	0.1	0.6	0.0	0.0		
-class III			0.0	0.0	0.0	0.0	0.0	0.0		
Lake -<50 ac			0.0	0.0	0.0	0.0	0.0	0.0		
->50 ac			0.2	1.2	0.1	0.6	0.0	0.0		

Table 1. (Continued) Capability of habitats to support spring populations of river otters in southeast Alaska.

	Distance From Saltwater									
	<500 ft		>500 ft							
Habitat			Riparian							
Volume Class			Elevation							
Food			<800 ft		800-1200 ft		>1200 ft		Not Riparian	
Production	Index	# / sq mi	Index	# / sq mi	Index	# / sq mi	Index	# / sq mi	Index	# / sq mi
Other	0.0	0.0							0.0	0.0
Stream-class I & II			0.0	0.0	0.0	0.0	0.0	0.0		
-class III			0.0	0.0	0.0	0.0	0.0	0.0		
Lake -<50 ac			0.0	0.0	0.0	0.0	0.0	0.0		
>50 ac			0.0	0.0	0.0	0.0	0.0	0.0		

[a] Class I streams support populations of anadromous fish
Class II streams support populations of resident fish
Class III streams do not support fish populations

HABITAT CAPABILITY MODEL FOR MARTEN IN SOUTHEAST ALASKA: WINTER HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of marten (Martes americana). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. This model was developed to evaluate the potential quality of winter habitat for marten. The winter cover requirements of this species are more restrictive than the cover requirements during other seasons of the year and availability of prey (Allen 1982). It is assumed that if adequate winter cover is available, habitat requirements throughout the balance of the year will not be limiting.

The marten is generally considered to be an inhabitant of climax forest communities throughout North America (Marshall 1951). The species prefers mature conifer or mixed forest stands although there are indications that it may be adaptable to a variety of forest habitats (Soutiere 1979). Use of habitat by marten is related to occurrence and availability of foods and to cover characteristics.

Extensive old-growth forests have been called the mainstay of marten populations in the Pacific states because they provide many den sites and abundant prey items (Meslow et al. 1981).

Marten have been eliminated throughout the southern and eastern portions of their original range (Strickland et al. 1982). This has been attributed to overharvesting and removal of mature forests through logging (Bergerud 1969; Dodds and Martell 1971; Strickland et al. 1982). Marten populations throughout southeast Alaska continue to be "reasonably dense" (Johnson 1981). However, very little is known of specific habitat associations in this area.

Habitat Use

Food

The food habits of marten have been studied extensively and are similar throughout their range, where studied (Marshall 1946; Cowan and MacKay 1950; Lensink et al. 1955; Quick 1955; Murie 1961; Weckwirth and Hawley 1962; Francis and Stephenson 1972; Goszczynski 1976; Koehler and Hornocker 1977; Campbell 1979; Soutiere 1979; Zielinski et al. 1983; Buskirk and MacDonald 1983). Marten utilize food from four

general categories: small mammals, birds, insects, and fruit.

The red-backed vole (Clethrionomys spp.) is the staple food source throughout the year but is most important during winter, where it occurs. The meadow vole (Microtus pennsylvanicus) appears to be a preferred food but may be generally unavailable to marten because their habitats do not overlap extensively. Deer mice (Peromyscus spp.) are abundant throughout marten habitat but are not well represented in food habits studies. Food habits studies have shown conflicting results concerning the use of red squirrels (Tamiasciurus hudsonicus) by marten. Several studies indicated that red squirrels are not preferred by marten. Other studies have reported that, at times, tree squirrels may be important to marten. The limited distribution of red-backed voles in southeast Alaska may result in dependence of marten on red squirrels in this area. The occurrence of birds and their eggs increases in the diet of marten in June and July when they are most vulnerable to marten. Fruits and berries make up a large part of the diet of marten in late summer when they become available. An increase in the occurrence of insects in the diet of marten also takes place in the summer.

Water

The requirements of water for marten have not been directly addressed in the literature. However, some inferences may be made from other observations. Marten have been reported to immediately seek water to drink after being released from live traps (Hawley 1955; Lensink et al. 1955). The distribution of the red-backed vole, the marten's major prey item, is closely associated with the presence of free water (Gunderson 1959). Marten have also been reported to select drainages and timber stands with moist areas for hunting sites (Simon 1980). These findings tend to indicate that habitat selection by marten may be influenced by the availability of free water. This association has not been quantified. However, water is probably not limiting in the wet climate of southeast Alaska.

Cover

Habitat use by marten has been related to very specific vegetation related attributes of the landscape. Numerous studies have reported the relationship between canopy cover and habitat preferred by marten. Koehler and Hornocker (1977) indicated that marten required at least a 30 percent canopy closure in Idaho. Spencer et al. (1983) reported that habitats in the northern Sierra Nevada with 40 to 60 percent canopy closure were preferred and that habitats with 30 percent or less canopy closure were avoided. The results of a study in eastern Canada indicated that marten prefer dense conifer forest in the winter with a canopy closure

greater than 75 percent (Bateman 1986). Hargis and McCullough (1984) further indicated that marten prefer areas with 100 percent cover. However, marten have also been reported to avoid dense stands (i.e., >60 percent crown closure) because of the lack of habitat for prey in these areas (Spencer 1981).

Conversely, marten avoid open habitats without tree canopy cover even though these areas often provide the best habitat for their preferred prey species (i.e., meadow vole) (Hawley and Newby 1957; Martell and Radvaryi 1977; Spencer 1981; Douglass et al. 1983). Spencer et al. (1983) reported that marten rarely went more than 30 feet (10 m) into treeless meadows. Ingram (1973) and Simon (1980) indicated that marten seldom penetrate more than 100 feet (30 m) into openings. Hargis and McCullough's (1984) observations indicated that marten would directly cross openings up to 160 feet (50 m) in width, but that they would not stop to rest or hunt. Openings up to 440 feet (135 m) across were traversed by martens if scattered islands of trees were available. Similar observations were reported by Koehler and Hornocker (1977), Spencer (1981), and Bateman (1986). They observed marten crossing clearcuts up to 330 feet (100 m) across with scattered trees and treeless openings up to 200 feet (60 m) across. Soutiere (1979) and Pulliainen (1981) both indicated that marten occasionally crossed openings up to 670 feet (200 m) across. Avoiding openings and traveling under the tree canopy may minimize the risk of predation for marten (Herman and Fuller 1974; Pulliainen 1981). It has also been suggested that deep snow in openings in winter may preclude successful hunting by marten (Koehler and Hornocker 1977; Soutiere 1979). The dense growth in clearcut openings in the summer may also hinder the marten's visual contact with prey and also provide escape cover for prey species, thus reducing foraging efficiency for marten (Steventon and Major 1982).

Special Habitat Characteristics

Snags are important to marten to provide dens for resting in both winter and and summer (Spencer 1987). Marten utilize the tops of broken snags as resting sites in the summer and cavities in snags in the winter and summer (Campbell 1979; Wynne and Sherburne 1984). The presence of snags is so critical to the well being of marten that Schmidt (1943) and Bergerud (1969) indicated that den site availability may limit marten populations. Marten tend to utilize large diameter, highly decayed snags as den sites (Cambell 1979; Spencer 1981). Preferred snags have been reported to range from 16 to 58 inches (40 to 147 cm) diameter at breast height (dbh) (Cambell 1979; Simon 1980; Spencer et al. 1983; Wynne and Sherburne 1984; Spencer 1987). All snags known to be used by marten during one study were sheltered, at least partially, by the overstory canopy (Simon 1980).

During periods of snow cover marten forage for prey almost exclusively under the snow where this aspect of their life history was studied (Murie 1961; Zielinski 1981; Buskirk 1983). They utilize down woody material extending above the snow to gain access to prey under the snow (Hargis and McCullough 1984). Many of the marten's preferred prey species also depend upon downed wood for food storage locations and den sites (Maser et al. 1979). Marten also use down logs and other woody debris covered by snow as den sites (Cambbell 1979; Spencer 1987). Marten avoid areas with little or no down woody material whether or not other cover requirements are met (Simon 1980). Dead and declining trees are therefore a necessary component of productive marten habitat (Wynne and Sherburne 1984).

Although marten can effectively use down woody material to forage under snow, the greater the depth of snow the more difficult it will be for marten to obtain food. At high elevations in southeast Alaska (i.e., >1,500 feet [460 m]) excessive snow depth may preclude marten activity. The high moisture content of snow in southern southeast Alaska may also reduce or preclude foraging under the snow. Habitat suitability may, therefore, decrease as elevation increases.

Interspersion of Habitats

Habitat selection by marten is driven by optimization of foraging success and minimization of danger and discomfort (Spencer 1981). Habitat of high quality for marten is a mosaic of plant communities (Buskirk 1983). This mosaic is best provided by uneven aged forests with an interspersion of patches of old-growth trees and small openings. Such forests provide habitat for prey species and the protective cover that is important for marten.

Habitat Model

The distribution and abundance of marten are determined to a large extent by the availability of cover and the presence of prey species (Simon 1980). A critical component of cover for marten, described by a number of studies, is canopy cover. Marten prefer habitats with canopies apparently for predator avoidance and other survival benefits. However, complete canopy closure results in a depletion of habitat for the marten's preferred prey species. The minimum canopy closure suitable for marten appears to be 30 percent (Koehler and Hornocker 1977). Optimum canopy closure ranges from 60 percent to 80 percent (Spencer et al. 1983; Bateman 1986). As canopy closure approaches 100 percent the value of marten habitat declines (Spencer 1981; Spencer et al. 1983). Measurements of overstory canopy closure are often not available, so alternate variables are necessary to express this relationship. A significant positive relationship has been demonstrated between canopy closure and timber volume ($r=0.81$, $P < 0.01$) based on data provided in Martin et al. (1985).

A number of studies have described the relationship between high quality marten habitat and the presence of snags (e.g., Simon 1980; Spencer et al. 1983; Wynne and Sherburne 1984; Spencer 1987). Snags typically used by marten as resting and den sites have a large diameter, often have a broken top, and are sheltered by the overstory canopy. Noble and Harrington (1981) completed an extensive survey of snag characteristics on Prince of Wales Island in southern southeast Alaska. Information from that survey indicates that stands of commercial forest (i.e., hemlock, spruce, hemlock/spruce) have higher densities of snags preferred by marten than other forest stands (i.e., noncommercial forest, muskeg forest).

Another important component of marten habitat that has been identified by numerous studies is dead and down woody material (e.g., Simon 1980; Steventon and Major 1982; Spencer et al. 1983; Hargis and McCullough 1984; Spencer 1987). Marten utilize dead and down material to gain access to prey under the snow and for den sites. Stand surveys completed in southeast Alaska currently do not provide information on density or presence of dead and down material. However, Brown and See (1981) have demonstrated a relationship between amount of dead and down material and productivity of a site. Their findings indicate that deposition of downed dead woody material generally increases with an increase in site productivity (i.e., the more productive sites grow more woody biomass for accumulation as downed woody material). Site index is also related to the volume of timber a stand produces (i.e., higher volume classes occur on areas with higher site index).

Timber volume classes may, therefore, be used to indicate degree of canopy closure, availability of suitable snags, and the presence of dead and down material in old-growth forests and their associated value as habitat for marten (Table 1).

Stand age, as represented by stand size class, also has a significant effect on the suitability of habitat for marten. A portion of this effect is related to the development of canopy cover. Canopy development can be predicted, to an extent, from the age of a stand on highly productive sites (Alaback 1984). Numerous studies have shown that clearcutting is detrimental to marten populations (de Vos 1951, 1952; Grakou 1972; Steventon and Major 1982; Snyder and Bissonette 1987). Clearcutting lowers the carrying capacity of an area for marten, resulting in larger home range sizes and lower population densities (Soutiere 1979). This results from an elimination of resting sites, winter hunting sites, overhead cover, and preferred prey species (Campbell 1979). Red-backed voles, the staple food source of martens in areas where these voles are present, are abundant in undisturbed forests, avoid forest openings, and are rare or absent for at least 10 years following

clearcutting (Miller and Getz 1972; Powell 1972; Martell and Radvaryi 1977; Campbell 1979). Red squirrels appear to follow similar trends (Wolff and Zasada 1975; Medin 1986). Populations of small mammals not preferred by marten (e.g., deer mice) generally increase in clearcut areas (Tevis 1956; Campbell 1979; Van Horne 1981). These factors indicate that the suitability of clearcuts as marten habitat is low (Table 2). Some habitat value for marten is retained in clearcuts in that residual slash provides overhead cover and some less-preferred prey species are available.

The dense overstory that develops at approximately age 25 and persists until the next rotation at age 100 decreases the amount of light that reaches the forest floor and results in a rapid depletion of the understory vegetation. Understory vegetation provides habitat for the primary prey species of the marten. Reduction in prey populations in second growth stands results in significant reductions of marten populations (de Vos 1952; Koehler et al. 1975) (Table 2).

Habitats within the beach fringe (i.e., 500 ft [150 m] of the beach) and to some extent within riparian zones have higher value for marten than upland habitats. The presence of 1) marine and aquatic organisms as a food source, 2) undercut banks for dens and burrows, 3) a deciduous tree layer, grasses, and sedges as habitat for prey species, and 4) increased dead and down material resulting from blowdown are assumed to make these habitats more valuable for marten, based on field experience (Table 3).

Availability of prey items for marten may decrease as snow depth increases, especially with elevation. Elevation, therefore, influences the quality of habitat for marten (Table 4).

Timber harvest and other resource development activities require the construction of roads. These roads provide additional access for trappers which usually results in increased harvests of marten. Marten are easily trapped and can be overharvested, especially where trapping pressure is heavy (Strickland et al. 1982). Density of roads may affect the quality of habitat for marten through trapping, especially where there is potential of overtrapping. Mean home range sizes reported for marten are approximately 1 mi^2 (2.6 km^2) (Strickland et al. 1982). Home ranges of males tend to be descrete but they overlap with the ranges of 1 or more females. Therefore, whenever roads are built within 2 mi (3.2 km) of the beach or built less than 2 mi (3.2 km) apart a high risk exists that unregulated trapping on these roads will result in an overharvest of resident marten. It is assumed, therefore, that as road densities exceed 0.2 mi/mi^2 densities of marten will decrease (Figure 1). At road densities of 0.6 mi/mi^2, marten

densities will be reduced by 90 percent due to greatly increased trapping pressure.

Equations

In order to obtain a life requisite value for marten for each habitat the individual Suitability Index values for appropriate variables must be combined. This is accomplished in this model by multiplying appropriate Suitability Index values together for a site to obtain the overall index value (Table 5).

Habitat Capability

The harvest density of marten on Prince of Wales Island in southern southeast Alaska has recently been estimated to be 0.8 marten/mi^2 (0.3 marten/km^2) (Alaska Department of Fish and Game, unpublished data). The proportion of a population of marten that may be harvested on a sustained yield basis has been estimated to be at least 40 percent (Quick 1956). Assumming that a harvest of 0.8 marten/mi^2 (0.3 marten/km^2) approximates 40 percent of the population the total density on Prince of Wales Island is 2 marten/mi^2 (0.8 marten/km^2) (i.e., 0.8 marten/mi^2/0.40 = 2 marten/mi^2 [0.3 marten/km^2/0.40 = 0.8 marten/km^2]). A mean density of 2 marten/mi^2 (0.8 marten/km^2) is therefore assummed in southeast Alaska.

This density was used to calibrate the model on a 136.6 mi^2 (35,380 ha) area in the interior of Prince of Wales Island. When optimum habitat (i.e., suitability index = 1.0) was assumed to support a population of 4 marten/mi^2 (1.6 marten/km^2) the model projected an overall density of 1.95 marten/mi^2 (0.76 marten/km^2). This approximates the estimated density of the area based on harvest estimates. Density of marten in optimum habitats is therefore assumed to be 4.0 marten/mi^2 (1.6 marten/km^2) (Table 5).

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on marten. This will be done to ensure the model results approximate the results of independent field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

In 1990, the trapping season for marten was closed on Northeast Chichagof Island due to the liklihood of significant overtrapping occurring several years in succession.

Subsequently, a marten study commenced on Northeast Chichagof Island with data collection performed by ADF&G. Preliminary results indicated the model was predicting marten at too high a density (32 percent). As a result, the density coefficient in the model has been reduced 32 percent forestwide. All effects analysis performed for the Supplement incorporated the 32 percent reduction.

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Table 1. Classes of timber volume in old-growth forests in southeast Alaska and associated habitat suitability values for marten.

Range of Timber Volume (bf/acre)	Volume Class	Habitat Suitability Value
<8,000	3 (i.e., noncommercial forest)	0.3
8-20,000	4	0.7
20-30,000	5	1.0
>30,000	6+	1.0

Table 2. Description of stand size classes (i.e., stand age) for forests in southeast Alaska and associated habitat suitability values for marten.

Stand Size Class	Description	Habitat Suitability Value
Seedling or Sapling	Trees <5 in (13 cm) dbh	0.2
Poletimber	Trees >5 in (13 cm) dbh, <9 in (23 cm) dbh	0.1
Young growth sawtimber	Trees >9 in (23 cm) dbh, <150 years old	0.1

Table 3. Suitability of beach fringe[a] and riparian areas as habitat for marten.

Habitat Description	Habitat Suitability Value
Beach fringe	1.0
Riparian	1.0
Upland	0.9

[a]Beach fringe habitats are those within 500 ft (150 m) of the mean high tide line.

Table 4. The effect of elevation on the suitability of habitats for marten in southeast Alaska.

Elevation	Habitat Suitability Values
<800 ft (245 m)	1.0
800-1500 ft (245-560 m)	0.6
>1500 ft (560 m)	0.0

Table 5. Suitability of habitats in southeast Alaska for marten[a].

Winter Habitat	Elevation							
	<800 ft (245m)				800-1500 ft (245-560 m)		>1500 ft (560 m)	
	Beach/Riparian		Upland					
	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi	Index	#/sq mi
Seedling or sapling	0.20	0.54	0.18	0.49	0.12	0.33	0.00	0.00
Poletimber	0.10	0.27	0.09	0.24	0.06	0.16	0.00	0.00
Young growth sawtimber	0.10	0.27	0.09	0.24	0.06	0.16	0.00	0.00
Old growth								
Noncommercial forest	0.30	0.81	0.27	0.73	0.14[b]	0.38	0.00	0.00
Volume class 4	0.70	1.90	0.63	1.71	0.43	1.17	0.00	0.00
Volume class 5+	1.00	2.71	0.90	2.44	0.60	1.63	0.00	0.00
Nonforest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[a]Table entries under Index are the products of the individual suitability index values for the habitat components listed in Tables 1-4.

[b]The value for noncommercial forest between 800 and 1500 ft (245 and 560 m) was considered to be lower than the products indicated because of the accumulation of snow at this elevation and the lack of down and dead woody material.

HABITAT CAPABILITY MODEL FOR BROWN BEAR IN SOUTHEAST ALASKA: SPRING HABITAT

Introduction

The brown bear (*Ursus arctos horribilis*)* has been recommended for use as a management indicator species in the revision of the Tongass Land Management Plan (Sidle and Suring, 1986). Habitat capability models are needed for each of the management indicator species selected for use in the plan revision. They will also be useful for project planning. These models are necessary for providing information to evaluate the biological effects of proposed land management activities on wildlife habitats and populations. This model evaluates quality of habitat for brown bears which is assumed to be related to long-term carrying capacity. Habitats are rated (using unpublished habitat preference data from Schoen and Beier) on the basis of their value to bears during late summer when they are most concentrated and vulnerable to human activities and land-use practices.

Cumulative effects analysis is a relatively new but important component of forest planning (Christensen, 1986, Weaver et al., 1986) and provides an approach for predicting the long-term effects of land management activities on brown bear habitat and populations. This model provides wildlife-forest managers with a tool for assessing cumulative effects of habitat change and human activity on brown bears.

Once widely distributed across western North America, brown bears currently range over a significantly reduced portion of the continent and were declared threatened in the United States south of Canada in 1975 (LeFranc et al., 1987). Loss of habitat to human encroachment and resource development is a serious problem for bear management in the lower 48 States and elsewhere (Zager and Jonkel, 1983, Contreras and Evans, 1986, Schoen, 1989).

In North America today, the largest population of brown bears occurs in Alaska (Peak et al., 1987) where there are an estimated 30-40,000 bears (Alaska Department of Fish and Game, 1978). Brown bears are indigenous to southeast Alaska where they occur throughout the mainland coast and on the islands north of Frederick Sound. The northern islands of Admiralty, Baranof, and Chichagof have some of the highest brown bear densities (e.g., 1 bear/square mile on northern Admiralty Island) in the world (Schoen and Baker, 1988).

* Although considered the same species, *U. a. horribilis* is referred to as brown bear in coastal Alaska and grizzly bear in interior areas and the remainder of North America.

The decline in the range and numbers of brown/grizzly bears over the past century in the lower 48 states has heightened management concern for this species and prompted an increase in brown bear research, particularly habitat-related studies throughout remaining ranges. Most of the significant research on bear/forestry relationships has been conducted within the last decade (see review in LeFranc et al., 1986, Zager and Jonkel, 1983, Contreras and Evans, 1986, Weaver et al., 1986) and several investigations are currently underway in British Columbia and Alaska (e.g., McLellan, 1986, Hamilton and Archibald 1986, Schoen and Beier, 1988).

Although much of southeast Alaska is still undeveloped, significant levels of timber harvest and mining are scheduled to occur throughout the range of the brown bear. Game Management Unit 4, which includes Admiralty, Baranof, and Chichagof Islands, is one of the most important brown bear hunting regions in the State, ranking 3rd behind the Alaska Peninsula and Kodiak Archipelago with an average annual hunter harvest of 83 bears since 1980 (unpublished data, ADF&G). Tourism and outdoor recreation are growing industries in this area. Brown bears are one of the unique features of the Tongass National Forest. Many visitors to southeast Alaska are interested in an opportunity to observe this symbol of the American wilderness.

Habitat Relationships

Odum (1971, p. 234) described habitat as the organism's "address" or the place it inhabits in fulfilling its life needs (e.g., food, cover, water, etc.). Harris and Kangas (1988) proposed that the definition of primary habitat explicitly extend beyond the individual to include an area of sufficient size or configuration to support a population over time.

The habitat relationships of brown/grizzly bears vary considerably across the diverse array of ecosystems they inhabit from the eastern Rockies, through coastal rain forests, and up to the arctic. The Alaska Department of Fish and Game began brown bear investigations in southeast Alaska in 1981 with particular emphasis on habitat relationships and the influence of timber harvest and mining activities on bear populations (see problem analysis and literature review in Schoen, 1986).

From 1981 through 1988, 70 brown bears have been radio-collared on northern Admiralty Island and over 2,700 relocations collected (Schoen and Beier, 1989). Habitat use by radio collared brown bears varied seasonally in response to food quality and availability (Table 1).

Brown bears begin emerging from high-elevation (> 1,000 feet) dens during April and emergence continues through May. After den emergence, many bears move to low-elevation old-growth forests, coastal sedge meadows, or south-facing

avalanche slopes. During early summer (mid June through mid July), most bears move up to forested slopes and alpine/subalpine meadows where they forage on newly-emergent vegetation.

Bears concentrate along low-elevation coastal salmon streams from mid July through early September. During this period, 60 percent of all bear relocation occurred within 0.1 mile (161 meters) of these streams (defined as the riparian zone for this model), and 39 percent of bear relocations within that zone occurred in riparian old-growth habitat (dominated by spruce-devil's club community [*Picea sitchensis*-*Oplopanax horridum*]) (Schoen and Beier, unpublished data).

Though most bears are associated with anadromous fish streams in late summer, some bears (primarily females) do not use coastal fish streams (Schoen et al., 1986). These bears (termed "interior" bears) remain in interior regions of the island throughout the year, foraging primarily on vegetation and berries in subalpine and avalanche slope habitat. By mid-September, most bears begin moving toward upper-elevation forests, avalanche slopes, and subalpine meadows where they feed on currant (*Ribes* spp.) and devil's club berries before denning.

Winter denning begins in October and November. Mean elevation and slope of 121 den sites of radio-collared bears from Admiralty and Chichagof Islands were 2100 feet (640 meters) and 35 degrees (Schoen et al., 1987a). Fifty-two percent of those dens occurred in old-growth forest habitat. Though cave denning was common on Admiralty Island, many dens were excavated under large-diameter old-growth trees or into the bases of large snags (Schoen et al, 1987a).

The seasonal food habitats of Admiralty brown bears was described by McCarthy (1989). During spring, their diet is dominated by sedges (*Carex* spp.), other green vegetation, roots, and deer. Sedges and salmon (*Oncorhynchus* spp.), are the major food items consumed during summer, though skunk cabbage (*Lysichitum americanum*), devil's club berries, and other plants, berries, and roots are also used. During fall, salmon, devil's club berries, skunk cabbage, sedge, beach lovage roots (*Lisgusticum* spp.), and currants dominate the diet. The distribution of bears corresponded closely to the seasonal abundance and quality of the food items listed above. Because bears have relatively inefficient carnivore digestive systems and are active for only part of the year, they are forced to exploit the most productive feeding sites available.

In southeast Alaska, old-growth forest is used extensively throughout the year by brown bears for foraging, cover, and denning. Clearcut logging generally results in the production of an abundance of forage plants utilized by

bears during early stages of forest succession (Mealy et al., 1977, Lindzey and Meslow, 1977, Zager et al., 1983). Theoretically, these sites should provide good or adequate habitat for a generalist species like the brown bear. However, on Chichagof Island, clearcuts were avoided by bears (only 2% of 866 relocations of 27 radio-collared bears occurred in clearcuts) (Schoen and Beier, 1988). Brown bears possibly made limited use of clearcuts there because other sites (e.g., alpine/subalpine habitat, wetlands, riparian old-growth, avalanche slopes) provided better foraging and cover habitat than clearcuts. Because younger second-growth conifer stands (25-150 years old) in Alaska produce minimal understory vegetation, second growth is poor foraging habitat for herbivores (Wallmo and Schoen, 1980, Alaback 1982, 1984).

Habitat Model

This model assumes that habitat quality is related to brown bear preference for different habitats (e.g., alpine, riparian old-growth, clearcuts, second growth). The ecological basis for inferring habitat quality from preference data is found in habitat selection theory (Rosenzweig, 1981, Fagen, 1988). As stated by Ruggiero et al. (1988) "Habitat preferences are based on evolved behavior and thus relate directly to the probability of persistence. Therefore, habitat preferences must be viewed as reliable information about the environments needed for population persistence, and should be considered a valid basis for management decisions." While recognizing potential problems associated with populations dynamics and interpretation of habitat availability (Johnson, 1980, Van Horne, 1983, McLellan, 1986), we have used habitat preference of radio-collared bears on Admiralty Island as our measure of habitat capability for brown bears in southeast Alaska.

Indexes of habitat preference were calculated using a transformation of Ivlev's (1961) electivity coefficient as follows: $E_t = r_i/r_i + p_i$, where E_t = the transformed coefficient of electivity or habitat preference index, r_i = the proportion of observed use of category $_i$ (relocations of radio-collared bears), and p_i = the proportion of category $_i$ in the study area (availability).

Nine major habitat categories were identified for use in this model: old-growth forest, beach-fringe old-growth, subalpine forest, second-growth forest, clearcuts, avalanche slopes, alpine, estuary, and other. Some of these were further subdivided relative to upland or riparian status, level of fish production, or age (Table 2).

The availability of habitat within the 141 square mile (365 square kilometer) Admiralty study area was estimated by extrapolation from a habitat database derived for a 116 square mile (300 square kilometer) subsection of this study area. The original availability data (collected for a deer

study) was determined from a random sample of 2495 points systematically overlaid on 1:12,000 scale aerial photographs. These were: old-growth 75.6%, subalpine 8.1%, alpine 9.6%, and other 6.6% (Schoen and Kirchhoff, unpublished data). In this study, we recognized a greater variety of habitat categories than in the original study. Old-growth forest was further subdivided into upland, beach fringe, and riparian and their relative abundance estimated. We also estimated the relative abundance of avalanche slopes and estuaries.

To simplify our habitat capability model, we identified the late summer season as the most critical or limiting period. Brown bears are most concentrated along low-elevation valley bottoms and coastal salmon streams at this time. These are the same areas of highest human use and most intense resource development activities (e.g., timber harvest and road construction). Late summer habitat use of radio-collared bears, habitat availability, index of habitat preference, and a habitat suitability index (scaled from 1 to 0) are presented in Table 3. Habitat use determinations excluded "interior" bears because these bears represent a relatively small proportion of the population (approximately 10%), may be somewhat unique to Admiralty Island, and are relatively isolated from most forest management activities.

Several additional habitats are listed for which we did not have preference data from Admiralty Island. These habitats are important because they are the result of forest management activities (e.g., riparian old-growth). We ranked riparian habitats into 3 categories (streams with high, low, and no anadromous fish values) based on best professional judgement (Table 2).

Because clearcuts (0-24 years old) and second-growth forest (25-150 years old) were not available within the Admiralty study area, their suitability was also ranked based on professional judgement (Table 2). The avoidance of clearcuts by radio-collared bears on Chichagof Island (Schoen and Beier, 1988) and the minimal forage production of second growth (Wallmo and Schoen, 1980, Alaback, 1982) justify their low rankings. We distinguished an older category of second growth (151-200 years old), however, with values intermediate between young second-growth and old-growth. Clearcuts and second growth in riparian sites with salmon streams were given higher value than upland sites because of the availability of spawning salmon.

Though availability of suitable den sites is an important component of brown bear habitat, we assume it is not limiting in most circumstances and it is unlikely to be substantially impacted by forest management. However, to minimize loss of denning habitat as a consequence of timber harvest, Schoen et al. (1987) recommended avoiding timber harvest on mid-volume (20-30 MBF/acre), hemlock-spruce

stands on slopes greater than 20 degrees at elevations above 980 feet (300 meters) in or adjacent to areas of brown bear concentrations.

Habitat Capability This model is designed to operate on a single- or multiple-watershed scale (e.g., ADF&G Wildlife Analysis Areas). Each of the 23 habitats is assigned a habitat capability value based on habitat preference or best professional judgement (Table 3). The density of brown bears in the Admiralty study site was estimated at 1 bear/square mile (1/2.6 square kilometers) (Schoen and Beier, 1988). We corrected this density to exclude the "interior" segment (10%) of the population. This resulted in a population of 127 bears within the 127 square mile (365 square kilometer) study area. Using this overall density and composition of habitats on the Admiralty study area, we estimated the bear density of each habitat (Table 3).

As the mix of habitats is changed by forest management activities, we can estimate changes in bear numbers by totalling the amount of each habitat category and multiplying by the bear density for that habitat. Following estimation of habitat capability, the model then incorporates effects of human-induced disturbance and/or mortality.

Human-Induced Disturbance and Mortality

Large carnivores, like brown bears which range over extensive areas (from 1,000 to 100,000 acres [400-40,000 hectares]), should be considered creatures of landscapes rather than of specific habitat types per se (Harris and Kangas 1988, Schoen, 1989). Aside from habitat impacts, resource development (e.g., timber harvest, mining, hydroelectric development, tourism, etc.) must also be evaluated in terms of human/bear interactions (peek et al., 1987, Mattson, 1989, McLellan, 1989, Schoen, 1989). Resource development in brown bear habitat (generally wild, undeveloped areas) significantly improves human access and consequently increases disturbance as well as direct human-induced mortality of bears (Pearson, 1977, Craighead et al., 1982, Schoen, 1989). In general, roads are detrimental to bears because they increase opportunities for human-bear interactions (Elgmork, 1978, Zager, 1980, Archibald et al., 1987, Rogers, 1987, Rogers and Allen, 1987, McLellan and Shackleton, 1988, Wilcove, 1988, and Schoen, 1989). Although it is possible to manage legal hunting of bears, it is difficult to control illegal kills, wounding loss, and defense of life or property kills (Schoen et. al., 1987b). Once an area is roaded for one development activity, it often results in additional developments which increase human-bear interactions, and ultimately reduces the areas capability for supporting viable bear populations (McLellan, 1989).

The dense rain forest of southeast Alaska provides more security cover for bears than more open habitats in the Rocky Mountains or northern Alaska. Road building activities in the Greens Creek drainage of Admiralty Island displaced fewer bears than expected presumably because of the security cover provided by the dense forest (Schoen and Beier, 1988). In southeast Alaska, limited displacement of bears away from human activity will likely result in increased bear-human interactions and ultimately greater bear mortality.

Another byproduct of development is waste disposal. Human garbage has been implicated as one of the major contributors to bear attacks on humans and ultimately the reason that many garbage habituated "problem" bears must be destroyed (Herrero, 1985:52).

The combination of increased road access and bears becoming habituated to garbage dumps (and people) is a major concern of bear managers in the coastal forests of British Columbia and southeast Alaska (Archibald, 1983, Archibald et al., 1986, Schoen, 1989, Weaver et al., 1989). For example, the brown bear season on northeastern Chichagof Island was closed under an emergency order of the Alaska Department of Fish and Game on September 30, 1988, because of high bear mortality resulting from increased road access and the inadequate garbage disposal policies of several small communities and logging camps. Clearly, the impacts of human activity and development on bears need to be incorporated into any habitat analysis of the effects of land management activities on brown bears (Schoen, 1989).

We subdivided the effects of human activity and development into different levels of impact. These relationships were estimated, based on best professional judgement, as reductions in habitat capability (or potential carrying capacity) within zones of human influence/disturbance (Table 4).

We estimated that larger communities would have greater impacts than smaller communities. For example, brown bears are rarely observed in or adjacent to major cities or towns in southeast Alaska, whereas they are much more frequently encountered near small villages. We similarly estimated that permanent camp sites would have more impacts than temporary camps. We also assumed that camp sites frequented by transient workers (many with limited Alaska experience) would be less inclined to tolerate bears than long-term permanent residents.

Landfills without effective fuel-fired incineration attract bears from distances of many miles. These bears habituated to humans and human's foods and are more prone to interact with humans thus decreasing their probability for long-term survival.

Road access was considered detrimental to bears. Mainline roads accessible to vehicles were estimated to have greater impacts on bears than spur roads and roads closed to vehicular traffic. We considered roads closed administratively (e.g., with gates or excavated pits) would still have some level of off road vehicle traffic. Though less detrimental to bears than roads accessible to vehicles, roads closed administratively pose greater impacts than permanently closed roads (e.g., through bridge removal). We considered that all roads, regardless of closure still have the potential for supporting additional human foot traffic which also influences bear populations.

Verification

This model has received interagency review by biologists from the Alaska Department of Fish and Game and the USDA Forest Service. The next stage in verification will be implementation in a pilot test of the GIS database currently being developed for southeast Alaska by the USDA Forest Service. This will allow biologists to utilize a large database in the model to determine whether results appear reasonable. Once the GIS is operational, the actual proportion of habitat types within the 141 square mile northern Admiralty Island study area can be determined. After completion of the GIS database, we will contrast model results between our study sites on Admiralty and Chichagof Islands where we have estimates of relative bear densities. Following these exercises, the model will be submitted for review to species experts independent of the model development.

Post Model Development

After preliminary analysis of model outputs in 1990, interagency biologists believe the model's predicted habitat capability for brown bears on the mainland of southeast Alaska was 70 percent too high. Analysis for the Tongass Plan Revision Supplement has incorporated this finding and reduced habitat capability estimates on the mainland accordingly.

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Table 1. **Seasonal habitat use of radio-collared brown bears[1] on Admiralty Island, southeast Alaska, 1982 through 1988.[2]**

Habitat Type	Habitat Use (%) Spring Early	Late	Summer	Fall	Annual
Old-Growth Forest					
Upland Forest	55.9	28.2	24.5	30.6	28.4
Riparian Forest	8.7	11.0	53.6	18.8	33.3
Beach Fringe	6.8	4.9	2.0	1.5	3.1
Subalpine Forest	3.7	14.0	5.2	10.3	8.4
Nonforest					
Avalanche Slopes	12.4	15.7	5.5	23.2	11.3
Alpine	3.7	18.9	2.8	7.6	8.4
Estuary	3.8	4.5	5.3	0.6	4.3
Other 5.0	2.8	1.1	7.4	2.8	
N relocations =	161	772	1285	340	2558

1 - Interior bears are not included.
2 - Schoen and Beier (1989).

Table 2. Description of habitat categories used in the habitat capability model for coastal brown bears.

Habitat	Description
Physiographic categories	
Beach Fringe	within 500 feet of mean high water
Estuary Fringe	within 1000 feet of mean high water along an estuary
Riparian	the ecological riparian zone or within 0.1 mile of a stream, whichever is larger
Upland	the area between the beach and estuary fringes and the subalpine, excluding the riparian
Forest categories	
Old Growth	unlogged stands greater than 300 years old
Subalpine	the ecological subalpine zone
Clearcuts	stands 0-25 years old
Young second growth	stands 26-150 years old
Older second growth	stands 151-200 years old
Nonforest categories	
Avalanche slopes	
Alpine	ecological alpine community
Estuary	portion of an estuary below mean high water
Other	miscellaneous (e.g., muskeg, rock, roads)
Stream categories	
High Fish	high availability anadromous fish
Low Fish	low availability anadromous fish
No Fish	no anadromous fish

Table 4. Reductions in brown bear habitat capability within zones of human activity/disturbance in southeast Alaska.

Human Activity/landscape modification:	Habitat reduction factor[1] within zone of influence	
Human Communities	< 1 mile	1 -5 miles
> 1000 people	0.0	0.3
501-1,000	0.0	0.5
11-500	0.3	0.6
< 10	0.5	0.8
Landfill without effective incineration	0.0	0.5
Forest Service cabin/developed campground	0.8	1.0
Permanent camp site	0.2	0.5
Temporary campsite	0.5	0.8
Access point (airstrip, dock, float plane lake)	0.8	1.0
Mainline roads accessible to vehicles and connected to ferry access or town	0.4	0.7
Secondary roads accessible to vehicles	0.6	0.9
Roads closed administratively	0.8	1.0
Roads closed permanently	0.9	1.0

[1] Habitat capability multiplied by this factor equals bear potential within the specified zone. Derivation of reduction factors based on best professional judgement.

HABITAT CAPABILITY MODEL FOR BLACK BEAR IN SOUTHEAST ALASKA

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of black bear (*Ursus americanus*). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. This model was developed to evaluate the potential quality of year-round habitats for black bear.

The original range of the black bear in North America corresponded with forested areas on the continent (Pelton 1982). However, the species has been extirpated from many midwestern and eastern states as a result of destruction and modification of habitat and over-exploitation of populations. Black bears now tend to be associated primarily with less settled, forested regions, including southeast Alaska. Black bears are highly adaptable and can tolerate moderate disturbances, such as habitat alteration, as long as the basic requirements for food and cover are satisfied (Lawrence 1979). Diversity of vegetative communities is the key to good bear range. Land management practices (e.g., timber harvest) may, therefore, enhance habitat for bears if their specific requirements are recognized and given consideration.

Habitat Use

Food

Although black bears have been characterized as omnivores they are primarily vegetarians that become carnivores only when prey or carrion is readily available. The dependance of black bears on vegetation as a food source has been demonstrated in that the distribution, availability, and phenology of key food plants are the primary factors affecting habitat selection and movements (Reynolds and Beecham 1980). Bears on a nutritionally superior diet generally mature earlier, have larger litters, and shorter breeding intervals (Rausch 1961, Jonkel and Cowan 1971, Rogers 1976, Reynolds and Beecham 1980). Although females normally breed only after separating from the cubs, some have been reported to breed while raising cubs in excellent habitat with abundant and diverse food supplies (LeCount 1980, Alt 1981).

The seasonal food habits of black bears in southeast Alaska may be predicted during years with adequate or abundant food. Black bears in this area normally leave their dens in April or May, depending on the severity of the winter (Erickson et al. 1982). Upon leaving their dens the bears

seek out estuaries, beach fringes, and avalanche slopes where they eat the shoots and new leaves of emerging vegetation growth (Halter 1972, Modafferi 1982). From mid-June through mid-July the bears move to mid-elevations to feed on salmon berries (Rubus spectabilis) and deer cabbage (Fauria crista-galli) (Modafferi 1982). The bears will feed on spawning salmon (Oncorhynchus spp.) in mid-July to fall if streams supporting runs of fish are available. However, bears will leave a readily available salmon food source in late August and move to ripening salmonberries and blueberries (Vaccinum spp.) at higher elevations near alpine (McIlroy 1972, Modafferi 1982). This food resource is utilized until the bears return to their spring-summer range prior to denning in the fall. Similar patterns of resource utilization have been reported for black bears in other locations (Amstrup and Beecham 1976, Kellyhouse 1980, Pelton 1982).

Water

Black bears require free water (Towrey 1984). However, the amount required depends on the water content of the food they consume. Bears that consume large quantities of succulent plants and berries may not need large quantities of free water. Southeast Alaska is an area of high rainfall and numerous streams. Therefore, bears should not have any difficulty meeting their water needs.

Cover

The availability of cover is second only to food in determining the suitability of an area for black bears (Lindzey and Meslow 1977, Landers et al. 1979). Suitable cover may be characterized as old-growth forest stands with a well developed understory (Kemp 1979, Pelton 1982). Several studies have shown that although black bears prefer a diversity of vegetation communities, with early successional stages providing good foraging sites, they will not forage far from cover provided by mature to old-growth forest stands (Erickson 1965, McCollum 1973, Lawrence 1979, Barber 1983, Schwartz and Franzmann 1983).

When threatened in openings, black bears tend to seek protection in the nearest mature old-growth forest stand (Lindzey and Meslow 1977). Females with cubs are even more sensitive to the availability of cover. They have been reported to forage only in forested areas or forage not more than 330 ft (100 m) from forested cover (Herrero 1978, Rogers 1977). During periods of inactivity (i.e., midday and midnight) bears also utilize old-growth forest habitat as bed sites (Pelton 1982, Barber 1983).

Cover is also critical for providing adequate sites for denning. The structural characteristics and specific location of black bear dens varies greatly among regions.

Excavated and natural depressions under tree roots, stumps, and fallen logs are often used (Erickson 1964, Rogers 1970, Lindzey and Meslow 1976, Tietje and Ruff 1980). The use of caves, bases of hollow trees, and above ground tree cavities has also been reported (Jonkel and Cowan 1971, Hamilton and Marchinton 1980, Johnson and Pelton 1981). Site condition (e.g., soil characteristics), climate, and availability contribute to the selection of den sites by black bears. Bears may prefer to excavate dens in areas that have well drained, stable soils that are excavated easily (Tietje and Ruff 1980). When such dens are lined with nest materials and are well covered with snow they offer excellent conservation of energy for overwintering bears (Folk et al. 1972).

However, ground den sites do not adequately reduce energy loss in southeast Alaska because of high ground moisture, limited soil development, and variable snow cover (Erickson et al. 1982). The potential for flooding is also great in excavated dens, especially in areas of high rainfall (Johnson and Pelton 1981, Alt and Gruttadauria 1984). In areas where soil is not suitable for excavation, old-growth timber is required to provide den sites (Beecham et al. 1983). Large, hollow trees are the preferred sites for dens when excavation is not possible (Landers et al. 1979). Tree dens provide a significant energy savings over open ground dens (Johnson et al. 1978, MacLentz et al. 1983). Tree dens also aid in maintaining female bears in good condition, resulting in increased productivity (Johnson and Pelton 1981).

Bears also tend to locate dens in areas where a dense understory provides concealment (Poelker and Hartwell 1973, Johnson and Pelton 1981, Beecham et al. 1983, LeCount 1983). Trees with characteristics suitable for bear dens (e.g., large, hollow) and a well developed understory are a product of old-growth forest in southeast Alaska (Erickson et al. 1982). Several studies, in Alaska and elsewhere, have reported a preference for mature and old-growth forests and avoidance of regenerating forests in selection of den sites (Lindzey and Meslow 1976, Tietje and Ruff 1980, Modafferi 1982). Kemp (1979) reported that although dens are usually located in mature and old-growth forest stands they also may occur in successional forests where snags of sufficient size are maintained. However, it should be noted that once snags in clearcuts and second growth forests deteriorate, replacements will not be available until the stand begins to assume old-growth characteristics (i.e., after 250 years).

Rates of den reuse from one year to the next tend to be low (e.g., 5 percent) throughout the range of the black bear (Tietje and Ruff 1980, Novick et al. 1981, Modafferi 1982, Beecham et al. 1983, LeCount 1983, Alt and Gruttadauria 1984). Low reuse of dens appears to be beneficial by

reducing predation by other bears and gray wolves (_Canis lupus_) and disease transmission (Alt and Gruttadauria 1984). Bears are also better able to relocate quickly, if they are disturbed, to previous years' dens. Availability of suitable dens was not a limiting factor in any of these study areas. Lindzey and Meslow (1976) reported a high rate of reuse (i.e., 50 percent) in an area where suitable den sites were not abundant. It is, therefore, beneficial to a bear population to have large areas of quality denning habitat available (i.e., old-growth forest in southeast Alaska). Areas with abundant tree dens may also provide centers of dispersion for bear populations (Johnson and Pelton 1981).

Interspersion of Habitats

The movements of black bears are governed by the availability of food and cover with food being the most critical factor. Home ranges may also vary depending upon sex and age of individual bears, weather, and population densities (Pelton 1982). Since most of these factors are subject to changes beyond the influence of habitat quality, it is difficult to quantify the effect of dispersion of habitats on black bears. For example, black bears have been reported to move more than 100 mi (160 km) in response to changing availability of food resources (Rogers 1977).

However, it is important to have food resources available within close proximity to bears when they emerge from their dens in the spring. Their energy reserves are usually depleted at this time and it is critical that the bears not be required to forage extensively to find areas of new plant growth (e.g., grass flats on estuaries). Although black bears are not dependent upon migrating salmon as a food resource in most years, salmon can provide needed high protein if streams with significant runs are readily available to the bears.

Habitat Model

Movements and distribution of black bears are primarily influenced by the availability of food and cover. Food of the black bear in southeast Alaska consists primarily of new plant growth on open areas (e.g., estuaries, avalanche slopes) in the spring and fruits such as blueberries and salmon berries throughout the rest of the summer. Many of the foods preferred by bears grow best in openings, such as avalanche slopes and clearcuts, so openings tend to enhance the value of forest habitat unless they are very large. Bears tend not to move very far from cover provided by mature and old-growth forests when they are foraging, so the centers of large openings without cover will not be utilized. The availability of migrating salmon to bears as a food source also affects the suitability of a site for black bears.

The availability of den sites is also a critical determinant of habitat quality for black bears. The characteristics of

preferred sites in southeast Alaska (e.g., hollow logs and trees, dense shrub growth) are typically associated with old-growth forests.

The capability of old-growth, forested habitats to produce food in the form of succulent plants in the spring (e.g., skunk cabbage [Lysichitum americanum]) and berries in the summer and fall is directly related to the composition, structure, and productivity of vegetation on a site. The plant association (habitat type) serves as an indicator of these characteristics as does site index which is reflected by volume of timber. The attributes of specific plant associations and timber volume classes may be used to quantify their value as habitat for black bear. Forested plant associations have been described for portions of southeast Alaska (Martin et al. 1985) and timber volume has been assigned to timber stands throughout southeast Alaska. old-growth forests, 250+ years old, are characterized, in part, by abundant canopy openings and a well developed understory. Production of skunk cabbage in the spring and summer tends to be highest in the open canopied, poorly drained muskeg forests (Table 1). Berry production is high in open canopied, low and mid volume timber stands and in the subalpine zone through out the summer. Suitability index values assigned to these habitats reflect the importance of these habitats to black bears.

Harvesting forested stands by clearcutting in southeast Alaska results in predictable stages of plant community composition and structure and associated use by black bears (Alaback 1982a, 1982b). Biomass of shrubs that provide preferred foods for black bears (i.e., salmon berry and blueberry) increases dramatically within the first 10 years after a stand is clearcut, providing excellent foraging habitat (Alaback 1984). Bears avoid clearcuts until forage plants have become well established (i.e., after 2 to 3 years in southeast Alaska) (Jonkel and Cowan 1971, McCollum 1973, Kellyhouse 1980). Clearcuts 10 to 15 years old are preferred because of the production of large amounts of soft mast (Lindzey and Meslow 1977) (Table 1). The tree canopy begins to close in after 20 years on the most productive sites and decreases the amount of light that reaches the forest floor (Alaback 1984). This results in a dramatic reduction of shrubs that produce food for bears in second growth stands. Production of soft mast is nearly eliminated by age 40 and black bears subsequently avoid these habitats until the canopy begins to open again at age 150 (Lindzey and Meslow 1977, Alaback 1984).

Black bears in Alaska utilize spawning salmon as a food source in late summer and fall when salmon are readily available (McIlroy 1972, Modafferi 1982). Riparian areas with salmon producing streams will therefore enhance the value of habitat for black bear over upland habitats during these times of the year (Table 2). The potential

productivity of a stream for salmon may be classified by channel type (Marion et al. 1987; unpublished data, Ketchikan Area, Tongass National Forest) (Table 3). Channel types with the highest potential salmon production will enhance surrounding habitat for black bears.

Upon emergence from dens in the spring black bears seek sources of new plant growth as forage (Hatler 1972, Modafferi 1982). Grass flats on estuaries provide such food sources in southeast Alaska. Low elevation forests near the beach, with skunk cabbage and deer cabbage, also provide needed forage at this time of the year. Plant phenology is delayed at higher elevations, so beach fringe habitats provide high quality for black bears during this critical period (Table 4). Estuaries also provide high quality foraging habitat for bears in late summer and fall, prior to denning (Table 5).

Black bears tend to select den sites in stands with specific cover attributes (e.g., availability of hollow trees and logs, well developed shrub layer). These attributes are characteristics of highly productive, mature and old-growth forests in southeast Alaska and can be related to stand age (Alaback 1984) and timber volume. As a stand approaches 250+ years of age it begins to exhibit these characteristics and subsequently should be more preferred as a den site than younger stands. The Suitability Index values assigned to habitats available in southeast Alaska include consideration of den sites (Tables 1, 2, 4, and 5).

Habitat capability The density of black bear on Prince of Wales Island in southern southeast Alaska has recently been estimated to be 1.5 bear/mi^2 (0.6 bear/km^2) (Alaska Department of Fish and Game, unpublished data). This is assumed to be the mean density on a typical forested landscape in southeast Alaska. This density was used to calibrate the model on a 136.6 mi^2 (35,380 ha) area in the interior of Prince of Wales Island. When optimum habitat (i.e., suitability index = 1.0) was assumed to support a population of 1.9 bear/mi^2 (0.7 bear/km^2) the model projected an overall density of 1.49 bear/mi^2 (0.58 bear/km^2). This closely approximates the estimated density of the area. Density of black bear in optimum habitats is therefore assumed to be 1.9 bear/mi^2 (0.7 bear/km^2) (Tables 1,2, and 4).

Disturbance and Human-induced Mortality Although black bears can adapt to changes in their environment induced by humans, associated increases in human-related mortality (other than legal hunting mortality) often reduces total density of black bears (Hugie 1979, Lentz et al. 1980, Pelton 1982). The effects of several activities that may result the displacement or mortality (through poaching and defense of life and property) of black bears were evaluated (Table 6). Coefficients were

established for each listed activity to provide an index to the effect of these activities on populations of black bears. The potential capability of habitats to support black bears in the vicinity of these activities is reduced by multiplying the density of black bears calculated from the habitat model by the appropriate coefficient.

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on populations of black bear. This will be done to ensure the model results approximate the results of field studies.

The location of stands coded as grassland in the timber inventory portion of the GIS should be evaluated and their importance and habitat for black bears determined. It should also be determined what is considered an estuary in the GIS database to verify that their importance as habitat for black bears is adequately represented.
Once these aspects of verification are completed, reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Suitability of upland habitats for black bear by season in southeast Alaska.

Habitat	Suitability Index by Season[a]					Annual Value[b]		
	Spring	Early Summer	Late Summer	Fall	Denning[c]	Cumulative	Index	/mi²
Old-growth								
20,000+ board feet/acre	0.5	0.5	0.4	0.4	1.5	3.3	0.7	1.3
8-20,000 board feet/acre	0.6	0.7	0.7	0.7	0.5	3.2	0.7	1.3
Muskeg forest	0.7	0.7	0.4	0.4	0.0	2.2	0.5	1.0
Subalpine zone	0.0	0.8	0.6	0.7	0.0	2.8	0.6	1.1
Second growth (> 25 yrs)	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
Clearcut (0-25 yrs)	0.6	0.5	0.7	0.7	0.6	3.1	0.6	1.1
Nonforest								
Avalanche slopes	1.0	1.0	0.5	1.0	0.0	3.5	0.7	1.3
Muskeg	0.0	0.1	0.1	0.1	0.0	0.3	0.1	0.2
Alpine	0.0	0.7	0.3	0.1	0.0	1.1	0.2	0.4

[a] Spring - from den exit to 15 June; black bear's diet consists mainly of grasses and early greening forbs.

Early summer - from 15 June to 15 July; black bear's diet consists mainly of forbs and berries.

Late summer - from 15 July to 15 September; black bear's diet consists mainly of fish, berries and forbs.

Fall - from 15 September to den entrance; black bear's diet is dominated by berries, forbs, and fish.

Denning - from den entrance to early spring; black bear are dependant on sites suitable for denning.

[b] The cumulative value is the sum of the seasonal values. The index was calculated by scaling the

cumulative values from 0 to 1 (i.e., all cumulative values were divided by the highest value - 4.8).

[c]Denning values for each habitat were weighted by 1.5 to reflect the importance of denning habitat in the model.

Table 2. Suitability of riparian habitats for black bear by season and potential salmon production in southeast Alaska.

Habitat Fish Production	Suitability Index by Season[a]					Annual Value[b]		
	Spring	Early Summer	Late Summer	Fall	Denning[c]	Cumulative	Index/mi^2	
Old-growth								
20,000+ board feet/acre								
High fish production[d]	0.5	0.5	0.7	0.7	1.5	3.9	0.8	1.5
Medium fish production[d]	0.5	0.5	0.5	0.5	1.5	3.5	0.7	1.3
Low fish production[d]	0.5	0.5	0.3	0.3	1.5	3.1	0.6	1.1
8-20,000 board feet/acre								
High fish production	0.6	0.7	0.9	0.9	0.5	3.6	0.8	1.5
Medium fish production	0.6	0.7	0.6	0.6	0.5	3.0	0.6	1.1
Low fish production	0.6	0.7	0.5	0.5	0.5	2.8	0.6	1.1
Muskeg forest								
High fish production	0.7	0.7	0.9	0.9	0.0	3.2	0.7	1.3
Medium fish production	0.7	0.7	0.6	0.6	0.0	2.6	0.5	1.0
Low fish production	0.7	0.7	0.5	0.5	0.0	2.4	0.5	1.0
Subalpine zone								
High fish production	0.0	0.8	0.8	0.9	0.6	3.1	0.6	1.1

Table 2 cont. Suitability of riparian habitats for black bear by season and potential salmon production in southeast Alaska.

Habitat Fish Production	Suitability Index by Season[a]					Annual Value[b]		
	Spring	Early Summer	Late Summer	Fall	Denning[c]	Cumulative	Index/mi^2	
Medium fish production	0.0	0.8	0.6	0.6	0.6	2.6	0.5	1.0
Low fish production	0.0	0.8	0.4	0.5	0.6	2.3	0.5	1.0
<u>Cottonwood</u>								
High fish production	0.5	0.5	0.7	0.7	1.5	3.9	0.8	1.5
Medium fish production	0.5	0.5	0.5	0.5	1.5	3.5	0.7	1.3
Low fish production	0.5	0.5	0.3	0.3	1.5	3.1	0.6	1.1
<u>Second growth</u>								
High fish production	0.0	0.0	0.5	0.5	0.2	1.2	0.3	0.6
Medium fish production	0.0	0.0	0.3	0.3	0.2	0.8	0.2	0.4
Low fish production	0.0	0.0	0.1	0.1	0.2	0.4	0.1	0.2
<u>Clearcut</u>								
High fish production	0.6	0.5	0.9	0.9	0.6	3.5	0.7	1.3
Medium fish production	0.6	0.5	0.6	0.6	0.6	2.9	0.6	1.1
Low fish production	0.6	0.5	0.5	0.5	0.6	2.7	0.6	1.1

Table 2 cont. Suitability of riparian habitats for black bear by season and potential salmon production in southeast Alaska.

Habitat Fish Production	Suitability Index by Season[a]					Annual Value[b]		
	Spring	Early Summer	Late Summer	Fall	Denning[c]	Cumulative	Index	/mi^2
Nonforest								
Avalanche slopes								
High fish production	1.0	1.0	0.8	1.0	0.0	3.8	0.8	1.5
Medium fish production	1.0	1.0	0.5	0.8	0.0	3.3	0.7	1.3
Low fish production	1.0	1.0	0.4	0.6	0.0	3.0	0.6	1.1
Muskeg								
High fish production	0.0	0.1	0.6	0.6	0.0	1.3	0.3	0.6
Medium fish production	0.0	0.1	0.3	0.3	0.0	0.7	0.2	0.4
Low fish production	0.0	0.1	0.2	0.2	0.0	0.5	0.1	0.2
Grassland								
High fish production	1.0	1.0	0.6	0.6	0.0	3.2	0.7	1.3
Medium fish production	1.0	1.0	0.3	0.3	0.0	2.6	0.5	1.0
Low fish production	1.0	1.0	0.2	0.2	0.0	2.4	0.5	1.0

Table 2 cont. Suitability of riparian habitats for black bear by season and potential salmon production in southeast Alaska.

Habitat Fish Production	Suitability Index by Season[a]					Annual Value[b]		
	Spring	Early Summer	Late Summer	Fall	Denning[c]	Cumulative	Index/mi^2	
<u>Other</u>								
High fish production	0.0	0.1	0.6	0.6	0.0	1.3	0.3	0.6
Medium fish production	0.0	0.1	0.3	0.3	0.0	0.7	0.1	0.2
Low fish production	0.0	0.1	0.2	0.2	0.0	0.5	0.1	0.2

[a] Spring - from den exit to 15 June; black bear's diet consists mainly of grasses and early greening forbs.

Early summer - from 15 June to 15 July; black bear's diet consists mainly of forbs and berries.

Late summer - from 15 July to 15 September; black bear's diet consists mainly of fish, berries and forbs.

Fall - from 15 September to den entrance; black bear's diet is dominated by berries, forbs, and fish.

Denning - from den entrance to early spring; black bear are dependant on sites suitable for denning.

[b] The cumulative value is the sum of the seasonal values. The index was calculated by scaling the cumulative values from 0 to 1 (i.e., all cumulative values were divided by the highest value - 4.8).

[c] Denning values for each habitat were weighted by 1.5 to reflect the importance of denning habitat in the model.

[d] Values for the production of anadromous fish have been assigned to streams and rivers in southeast Alaska on the basis of channel type (Marion et al. 1987; USDA Forest Service, Ketchikan Area, unpublished information) (Table 3).

Table 3. Potential production[a] of pink salmon (*Oncorhynchus gorbuscha*) and coho salmon (*O. kisutch*) by channel type[b] in southeast Alaska.

Production Group Channel Type	Adult Pink Salmon/ft	Adult Coho Salmon/ft
High fish production		
Shallowly incised, low gradient, lowland channel (B1)	2.27	0.0072
Shallowly incised, low gradient, floodplain channel (C1)	4.03	0.0150
..............................(C1/B3)	1.82	0.0050
Shallow to moderately incised, low gradient, lowland channel (C2)	2.06	0.0104
Shallowly incised, low gradient, floodplain channel (C3)	8.58	0.0170
Shallowly incised, low gradient, high energy, floodplain channel (C3.1)	2.21	0.0078
Moderate to deeply incised, low gradient, lowland channel (C5)	1.09	0.0068
Shallowly incised, low gradient, deep water channel, lowland channel (L3)	3.34	0.0120
Low gradient, estuarine channel (E1)	9.19	0.0106
Low gradient, rocky, estuarine channel (E2)	2.91	0.0066
Average production	3.75	0.0098
Medium fish production		
Non-incised, high gradient, alluvial/colluvial fan channel (A3)	0.52	0.0016
Shallowly incised, moderate gradient, footslope channel (B2/B3)	0.91	0.0046
Shallowly incised, moderate gradient, transitional footslope channel (B4)	0.49	0.0026
Shallowly incised, low gradient, adfluvial fan channel (B5)	0.90	0.0022
Moderately incised, moderate gradient, transitional footslope channel (B6)	0.53	0.0036
Deeply incised, moderate gradient, transitional channel (B7)	0.41	0.0046
Average production	0.63	0.0032

Table 3. (Continued) Potential production[a] of pink salmon (*Oncorhynchus gorbuscha*) and coho salmon (*O. kisutch*) by channel type[b] in southeast Alaska.

Production Group Channel Type	Adult Pink Salmon/ft	Adult Coho Salmon/ft
Low fish production		
Very deeply incised, high gradient, mountain slope channel (A1)	0.13	0.0014
Deeply incised, high gradient, mountain slope channel (A2)	0.19	0.0020
Shallowly incised, very high gradient, mountain slope channel (A4)	0.15	0.0010
Deeply incised, high gradient, mountain slope channel (A5)	0.15	0.0018
Shallowly incised, high gradient, transitional channel (A6)	0.06	0.0016
Low gradient, glacial sloping, lowland cahnnel (D1)	0.00	0.0030
Low gradient, nonforested, lowland channel (L1)	0.07	0.0042
Average production	0.11	0.0021

a Fishery production values are from USDA Forest Service, Tongass National Forest, Ketchikan Area, unpublished information.

b Channel types are from Marion et al. (1987).

Table 4. Suitability of beach fringe[a] habitats for black bear by season in southeast Alaska.

Habitat	Suitability Index by Season[b] Spring	Early Summer	Late Summer	Fall	Denning[d]	Annual Value[c] Cumulative	Index	#/mi^2
Old-growth								
20,000+ board feet/acre	0.8	0.6	0.5	0.4	1.5	3.8	0.8	1.9
8-20,000 board feet/acre	0.8	0.7	0.6	0.5	0.5	3.1	0.6	1.7
Muskeg forest	0.9	0.7	0.6	0.5	0.0	2.7	0.6	1.1
Second growth	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
Clearcut	0.8	0.6	0.6	0.5	0.5	3.0	0.6	1.1
Nonforest								
Avalanche slopes	1.0	0.8	0.5	1.0	0.0	3.3	0.7	1.3
Muskeg	0.0	0.1	0.1	0.1	0.0	0.3	0.1	0.2

a Beach fringe is defined as all areas within 500 ft (150 m) of mean high tide.

b Spring - from den exit to 15 June; black bear's diet consists mainly of grasses and early greening forbs.

Early summer - from 15 June to 15 July; black bear's diet consists mainly of forbs and berries.

Late summer - from 15 July to 15 September; black bear's diet consists mainly of fish, berries and forbs.

Fall - from 15 September to den entrance; black bear's diet is dominated by berries, forbs, and fish.

Denning - from den entrance to early spring; black bear are dependant on sites suitable for denning.

c The cumulative value is the sum of the seasonal values. The index was calculated by scaling the cumulative values from 0 to 1 (i.e., all cumulative values were divided by the highest value - 4.8).

[d] Denning values for each habitat were weighted by 1.5 to reflect the importance of denning habitat in the model.

Table 5. Suitability of estuary fringe[a] habitats for black bear by season in southeast Alaska.

Habitat	Suitability Index by Season[b]					Annual Value[c]		
	Spring	Early Summer	Late Summer	Fall	Denning[d]	Cumulative	Index	$\#/mi^2$
Old-growth								
20,000+ board feet/acre	0.9	0.7	0.9	0.8	1.5	4.8	1.0	1.9
8-20,000 board feet/acre	0.9	0.6	1.0	0.9	0.5	3.9	0.8	1.5
Muskeg forest	1.0	0.6	1.0	0.9	0.0	3.5	0.7	1.3
Second growth	0.1	0.1	0.1	0.1	0.2	0.6	0.1	0.2
Clearcut	0.8	0.6	0.6	0.5	0.5	3.0	0.6	1.1
Nonforest								
Avalanche slopes	1.0	0.8	0.5	1.0	0.0	3.3	0.7	1.3
Muskeg	0.0	0.1	0.1	0.1	0.0	0.3	0.1	0.2

[a] Estuary fringe is defined as all areas within 1000 ft (300 m) of mean high tide, adjacent to estuaries.

[b] Spring - from den exit to 15 June; black bear's diet consists mainly of grasses and early greening forbs.

Early summer - from 15 June to 15 July; black bear's diet consists mainly of forbs and berries.

Late summer - from 15 July to 15 September; black bear's diet consists mainly of fish, berries and forbs.

Fall - from 15 September to den entrance; black bear's diet is dominated by berries, forbs, and fish.

Denning - from den entrance to early spring; black bear are dependant on sites suitable for denning.

[c] The cumulative value is the sum of the seasonal values. The index was calculated by scaling the cumulative values from 0 to 1 (i.e., all cumulative values were divided by the highest value - 4.8).

d Denning values for each habitat were weighted by 1.5 to reflect the importance of denning habitat in the model.

Table 6. Effects of disturbance on the habitat capability for black bears in southeast Alaska.

Activity/landscape Modification	Reduction Factor
Open-pit garbage dump	
(< 1 mi radius)	0.1
(1-5 mi radius)	0.5
FS cabin/developed campground/seasonal camp	
(≤ 1 mi radius)	0.9
Permanent camp site/ residence/float camp	
(< 1 mi radius)	0.6
(1-5 mi radius)	0.9
Access point (airstrip, dock, lake/float plane)	
(≤ 1 mi radius)	0.9
Road accessible to vehicles	
(≤ 2 mi radius)	0.8
Transportation link (ferry access/town)	
(≤ 2 mi radius)	0.8
Accessible road within 0.5 mi of anadromous fish stream	
(≤ 0.5 mi radius)	0.8
Trails or road access limited to hiking	
(≤ 2 mi radius)	0.9
Road limited to hiking/ ORV (≤ 0.5 mi of anadromous fish stream)	
(≤ 1 mi radius)	0.9

HABITAT CAPABILITY MODEL FOR GRAY WOLVES IN SOUTHEAST ALASKA

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of gray wolf (Canis lupus). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is applicable throughout southeast Alaska.

The original distribution of gray wolves included all of North America except for the southeast United States, extreme southwest California, and western Mexico (Paradiso and Nowak 1982). The gray wolf has been eliminated throughout most of the lower 48 United States as a result of predator control programs and loss of habitat. Remnant populations remain in northern Minnesota and a small portion of northwest Montana. Gray wolves continue to occur throughout Alaska. Their populations in Alaska have been characterized as stable to increasing (Townsend 1986). The distribution of gray wolves in southeast Alaska generally includes all areas except Admiralty, Baranof, and Chichagof Islands. Gray wolves were subjected to indiscriminate killing and bounties throughout Alaska during the early 1900s (Harbo and Dean 1983). A federal wolf control program with emphasis on poisoning and aerial hunting began in the 1940s. This program continued in southeast Alaska until statehood was achieved in 1959.

Habitat Use

Gray wolves do not exhibit a preference for specific habitats or habitat characteristics (Paradiso and Nowak 1982). Their original distribution included arctic tundra; taiga; plains or steppes; savannahs; and hardwood, softwood, and mixed forests. The presence and well being of gray wolves appears to be dependant on the availability of prey rather than land form, climate, or vegetation.

A review of the population dynamics of gray wolves demonstrated that rates of increase are primarily determined by the availability of ungulate prey (Keith 1983). Potvin (1988) determined that the population of wolves he studied in Quebec was regulated largely by social factors and not by food stress. Packard and Mech (1980) concluded that intrinsic social factors and the influence of food supply are interrelated in determining population levels of gray wolves. It has been demonstrated that predation by gray wolves sustains declines in ungulate populations that have been initiated by the other factors (e.g., severe weather, habitat change) (Mech and Karns 1977, Nelson and Mech 1981, Gasaway et al. 1983, Van Ballenberghe and Hanley 1984, Smith

et al. 1986a). As prey populations decline the well-being of gray wolf populations is depressed and their populations also decline (Van Ballenberghe and Mech 1975, Messier 1985, 1987).

The gray wolf has adapted to a carnivorous diet that is made up mainly of large ungulates or beaver (Castor canadensis) (Paradiso and Nowak 1982). Prey must be taken frequently by gray wolves. This prey includes deer (Odocoileus spp.), moose (Alces alces), caribou (Rangifer tarandus), Dall sheep (Ovis dalli), bighorn sheep (Ovis canadensis), and beaver (Murie 1944, Cowan 1947, Tompson 1952, Mech 1966, Pimlott et al. 1969, Van Ballenberghe et al. 1979, Nelson and Mech 1981, Fritts and Mech 1981, Gasaway et al. 1983, Peterson et al. 1984). Prey available to gray wolves in southeast Alaska include Sitka black-tailed deer (Odocoileus hemionus sitkensis), moose, mountain goat (Oreamnus americanus), beaver, and spawning salmon (Oncorhynchus spp.) (LaResche et al. 1974, Fox and Streveler 1986, Smith et al. 1986b)

Habitat Capability

The habitat capability model for gray wolves is tied directly to habitat capability models for Sitka black-tailed deer, moose, and mountain goat (Suring et al. 1988a, 1988b). The assumption is made in this model that gray wolves will first select large ungulates as prey and utilize beaver as maintenance prey when ungulates are not plentiful (Mech 1970).

As a minimum, 3.7 pounds (1.7 kg)/day of prey are required to maintain a gray wolf (Mech 1970). The normal amount of prey consumed by gray wolves ranges from 5.5 pounds (2.5 kg) to 13.9 pounds (6.3 kg)/day (Mech 1974). The median figure of 9.7 pounds (4.4 kg)/day is the amount of prey assumed to be required by a gray wolf in this model.

The mean weight of 45 adult Sitka black-tailed deer collected in southeast Alaska was 93 pounds (42.2 kg) (Johnson 1987). The mean weight of 7 fawns was 42 pounds (19.3 kg) in the same study. Approximately 50 percent of deer killed by gray wolves are fawns (Pimlott 1967, Fritts and Mech 1981). Therefore, the average weight of adult and fawn deer killed by gray wolves in southeast Alaska is assumed to be 68 pounds (31 kg).

The mean weight of 17 adult Alaska female moose was approximately 990 pounds (450 kg) (Franzmann et al. 1978). The average weight of Alaska calves in October was approximately 400 pounds (180 kg); by 16-18 months of age moose approach a mean weight of 615 pounds (280 kg) (Franzmann et al. 1978). Reported proportions of calves in wolf-killed moose range from 34 percent to 56 percent (Peterson 1977, Peterson et al. 1984). Wolf predation decreases significantly for moose from ages 1 to 5, then increases again after 6 years. The assumption is made in this model that 50 percent of moose killed by gray wolves are calves and 50 percent are older adults. Therefore, the

average moose killed is assumed to weigh approximately 700 pounds (320 kg).

The approximate mean weight of adult mountain goats was reported as 140 pounds (65 kg) (Rideout 1974). However, the larger males are probably not preyed upon as extensively as smaller mountain goats so the average weight of mountain goats is assumed to be 110 pounds (50 kg) for the purposes of this model.

The weights used by Peterson (1977) for edible portions of a carcass suggest that approximately 75 percent of a carcass is available to gray wolves as food. The remaining 25 percent consists of inedible stomach and intestinal contents and portions of the hide and skeleton that are usually left uneaten. The assumption is made in this model that gray wolves consume 75 percent of the body weight of prey captured.

Numerous studies have shown that the vulnerability of individual prey species varies. Gray wolves tend to take younger and older animals and those individuals that are injured or sick (Mech 1970, Peterson et al. 1984). Mech (1977) has also shown that potential prey living in the buffer zones between gray wolf pack territories are less vulnerable to predation than individuals within the territories. Buffer zones constitute from 25 percent to 40 percent of an area. These findings imply that all individuals within a prey population are not equally available to gray wolves as prey. It has also been generally concluded that gray wolves do not completely deplete their prey populations (Murie 1944, Stenlund 1955, Pimlott et al. 1969, Mech 1970, Kolenosky 1972).

Data presented in Nelson and Mech (1981) indicate that the annual mortality of deer as a result of predation by gray wolves was approximately 15 percent for fawns and 18 percent for adults in northeastern Minnesota. The winter habitat capability model for Sitka black-tailed deer developed for southeast Alaska assumed a 10 percent to 30 percent predation rate of gray wolves on deer depending on snow depth (Suring et al. 1988a). The assumption is made in this model that 20 percent of the potential annual deer population is available, as prey, to gray wolves.

The percentage of moose populations reported killed by gray wolves in Alberta and interior Alaska ranged from 10 percent to nearly 30 percent (Fuller and Keith 1980, Gasaway et al. 1983). However, deer are the preferred prey of gray wolves when deer are available (Pimlott et al. 1969, Mech and Frenzel 1971, Potvin, Jolicoeur, and Huot 1988). Considering this aspect and the limited distribution of moose in southeast Alaska it is assumed in this model that 5 percent of the potential annual moose population is available as prey to gray wolves.

The habitats preferred by mountain goats (i.e., associated with cliffs) are effectively used to avoid predation by gray wolves (Smith et al. 1986b). The annual rate of predation on mountain goats by gray wolves is assumed to be 5 percent in this model.

Harvests of these prey populations (i.e., Sitka black-tailed deer, moose, and mountain goat) by humans may also decrease the amount of prey available to gray wolves. However, the assumption is made in this model that predation by gray wolves takes place before hunting mortality occurs.

Densities of 0.1 adult gray wolves/mi^2 (0.04/km^2) are considered high (Paradiso and Nowak 1982). This density has been generally accepted as the saturation point beyond which gray wolf populations would not expand (Pimlott 1967, Mech 1970). Instances have been reported in which gray wolf populations have exceeded this density (Kuyt 1972, Van Ballenberghe 1974). Mech (1974) concluded that average gray wolf densities very rarely exceed 0.1/mi^2 (0.04/km^2) but that densities may almost double during periods of exceptionally high prey concentrations. Maximum density of adult gray wolves in this model will not exceed 0.1/mi^2 (0.04/km^2).

As ungulate prey populations decline due to habitat changes or severe winters, gray wolf populations will exhibit a similar decline (Van Ballenberghe et al. 1975, Van Ballengerghe and Mech 1975). It is assumed that beaver provide a subsistence prey source in southeast Alaska upon which gray wolves can rely when ungulate populations are at low levels. Such a situation currently exists on the northeast portion of Revillagigedo Island in southern southeast Alaska (Smith et al. 1986b). Late winter population density of gray wolves in this area was estimated to be 0.01/mi^2 (0.004/km^2). This is assumed to be the minimum density of gray wolves in this model.

Equations

<u>Sitka black-tailed deer</u>: The equation that estimates the annual prey base provided to gray wolves by the Sitka black-tailed deer population is:

$$\text{\# of wolves supported by deer} = \frac{\dfrac{[(\text{\# deer/mi}^2 \times .2) \times 68 \text{ pounds/deer}] \times .75}{9.7 \text{ pounds/wolf/day}}}{365 \text{ days/year}}$$

Where 0.2 = maximum proportion of prey population available to gray wolves.

0.75 = proportion of carcass that is edible.

Moose: The equation that estimates the annual prey base provided to gray wolves by the moose population is:

$$\#\text{ of wolves supported by moose} = \frac{[(\#\text{ moose/mi}^2 \text{ x } .05) \text{ x } 700\text{ pounds/moose}] \text{ X } .75}{9.7\text{ pounds/wolf/day} \quad 365\text{ days/year}}$$

Where 0.05 = maximum proportion of prey population available to gray wolves.

0.75 = proportion of carcass that is edible.

Mountain goat: The equation that estimates the annual prey base provided to gray wolves by the mountain goat population is:

$$\#\text{ of wolves supported by mountain goats} = \frac{[(\#\text{ goats/mi}^2 \text{ x } .05) \text{ x } 110\text{ pounds/goat}] \text{ X } .75}{9.7\text{ pounds/wolf/day} \quad 365\text{ days/year}}$$

Where 0.05 = maximum proportion of prey population available to gray wolves.

0.75 = proportion of carcass that is edible.

Gray wolves: The equation that estimates the potential population of gray wolves is:

$\#$ gray wolves/mi^2 = # of deer supported by wolves + # of deer supported by moose + # of deer supported by mountain goats

$$0.01/\text{mi}^2 \leq \#\text{ gray wolves/mi}^2 \leq 0.1/\text{mi}^2$$

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on populations of gray

wolves. This will be done to ensure the model results approximate the results of independent field studies.

The minimum and maximum densities of gray wolves (i.e., $0.01/mi^2$ [$0.004/km^2$] and $0.1/mi^2$ [$0.04/km^2$] respectively) require verification to determine if these values overly restrict operation of the model. It should also be determined during verification exercises if there a difference in model results when the maximum proportion of the prey population available is calculated on a stand by stand basis as compared to a Minor Harvest Unit basis. The differences, if any, in these approaches should be documented and a preferred method recommended. Interactions between the habitat capability models for the prey species and this model should be evaluated to ensure that realistic results are obtained.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

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HABITAT CAPABILITY MODEL FOR RED SQUIRRELS IN SOUTHEAST ALASKA

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of red squirrels (*Tamiasciurus hudsonicus*). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Year-round habitat of the red squirrel is evaluated in the model.

Red squirrels are associated with boreal forests from Alaska across North America and south into the coniferous forests of the Rocky Mountains (Flyger and Gates 1982). In the east they occur across the Great Lake states to the Atlantic Ocean. Red squirrels occur naturally on the mainland throughout southeast Alaska. In 1930 and 1931 they were introduced to Baranof and Chichagof islands as a potential prey species for recently introduced marten (*Martes americana*) (Burris and McKnight 1973). Red squirrels are currently abundant on Baranof, Chichagof, Kruzof, and adjacent islands as well as mainland areas (Johnson 1981).

Habitat Use

Food items normally eaten by red squirrels include seeds, fleshy fruits, green plant matter, fungus, flesh, and insects (Klugh 1927, Hatt 1929, Layne 1954, Ferron et al. 1986). However, red squirrels are so strongly associated with conifer forests that their population densities (e.g. productivity, survival, and dispersal) fluctuate with cone crops (Smith 1968, Gurnell 1983, Halvorson and Engeman 1983). During periods of cone abundance red squirrels will annually cut and cache from 12,000 to 16,000 cones for later use. Red squirrels were able to survive the first of two consecutive years of cone failure in a mature white spruce

(*Picea glauca*) forest in interior Alaska by feeding on cached cones (Smith 1968). However, a 67 percent drop in numbers of the red squirrel population followed the second crop failure. The remaining red squirrels survived by utilizing spruce buds as their primary food during the winter. During late spring mushrooms became the most important food item in their diet. Spruce cones, spruce buds, and mushrooms made up over 90 percent of the red squirrels diet during this study.

Red squirrels have adapted to utilize conifer seeds and fungi in boreal conifer forests (Smith 1970). Therefore, their habitat can be broadly defined as conifer forest throughout their range. Red squirrels establish and hold territories within these habitats (Smith 1968 and 1981, Kemp and Keith 1970, Rusch and Reeder 1978). Individual red

squirrels of both sexes defend territories ranging from 0.5 to 7.5 acres (0.2 to 3.0 ha) that are centered on caches of cones (Hatt 1943, Finley 1969, Smith 1981, Gurnell 1984, Lair 1987) and nest sites (Vahle 1978, Rothwell 1979).

Since red squirrels are so strongly dependant upon conifer seeds as a food supply, conifer forests must be of seed producing age before red squirrels will make significant use of them. Habitat quality is also related to nesting cover and food caching sites. Natural cavities are preferred by red squirrels as nest sites (Hamilton 1939, Layne 1954). However, underground nests and external tree nests are more commonly used where cavities are not available (Fancy 1980). Such nests are constructed primarily of grass or moss with an inner compartment of shredded bark, leaves, feathers, and fur.

Tree diameter and branching structure appear to be the most important factors influencing nest-tree selection (Fancy 1980). Mean diameter at breast height (dbh) of white spruce with nests present was significantly greater than mean dbh of randomly selected white spruce trees near Atlin, British Columbia. Nests also tended to be located in trees, or portions of trees, with the most dense branches. Another important feature associated with nest trees on the Atlin site and also reported by Rothwell (1979) in Wyoming and Vahle and Patton (1983) in Arizona is interlocking crowns with adjacent trees. The close proximity of the nest tree to surrounding trees offers protection from weather, provides multiple escape routes, and reduces foraging time.

Habitat selection in red squirrels is also related to food cache sites. Large diameter trees, large standing snags, and fallen trees are important sites for cone storage (Vahle and Patton 1983). The frequent association of caches with large-diameter trees, logs, and snags indicates that red squirrels prefer these sites for use as feeding stations and caches. The crevices under downed logs and cavities in snags provide protection for stored cones.

Habitat Model

Optimum habitat for red squirrels provides opportunities for obtaining food, food caching sites, and nesting cover (Vahle and Patton 1983). This includes forested stands with 2 or more species of conifers of cone-bearing age for food, snags for den sites, and down logs to serve as nuclei for food caches. These conditions are best provided in old-growth Sitka spruce (*Picea sitchensis*) forests in southeast Alaska which is assumed to provide optimum habitat (Table 1). Middens are consistently associated with large Sitka spruce trees in southeast Alaska and density of middens is higher in Sitka spruce stands than in other forest types (Alaska Dep. Fish and Game, unpublished data). Although western hemlock (*Tsuga heterophylla*), western red cedar (*Thuja plicata*), and Alaska cedar (*Chamaecyparis nootatensis*) forest types provide the life requirements of red squirrels,

food resources are not as plentiful as in forest types with a high Sitka spruce component.

Tree densities are low in muskeg forests and trees tend to be situated in stringers or small groups. Red squirrel nests are rarely located in isolated trees or clumps of trees indicating limited preference for this type of forest (Rothwell 1979). Although red squirrels are found in pure hardwood stands their preferred habitat is conifer forest so the suitability index for deciduous stands is low (Flyger and Gates 1982).

Populations of red squirrels have been shown to decline significantly following clearcutting (Wolff and Zasada 1975; Medin 1986). However, use of clearcuts by red squirrels is not entirely precluded (Krull 1970). Fisch and Dimock (1978) reported squirrel use of 6 to 12-year-old clearcuts in western Oregon and Washington where the squirrels were feeding by clipping buds and new shoots of regenerating conifers. Red squirrel populations in 20-year-old stands exhibited characteristics associated with suboptimal habitats (e.g., low proportion of breeding females, low survival rates) (Sullivan and Moses 1986). Therefore, the suitability of clearcuts approximately 0 to 25 years of age is low (Table 1).

Cone production (i.e., food production) may not begin until age 40 in Sitka spruce (Ruth 1958) which diminishes the value of pole stands as habitats for red squirrels (Table 1). Heavy cone and seed production has been reported in 100 year-old stands of western hemlock and Sitka spruce indicating valuable habitat for red squirrels (Ruth and Berntsen 1955). However, cavities are not available as den sites.

Habitat Capability The highest reported densities for red squirrels exceed 3600 squirrels/mi^2 (230/km^2) in white spruce forests (Flyger and Gates 1982). However, densities of red squirrels are not thought to be that high in southeast Alaska (Alaska Dep. Fish and Game, unpublished data). Optimum habitat (i.e., suitability index = 1.0) in southeast Alaska is assumed to support 1280 squirrels/mi^2 (80/km^2) (Table 1).

Verification This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be

run on other areas in southeast Alaska for which more complete information is available on red squirrels. This will be done to ensure the model results approximate the results of independent field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Capability of habitats to support red squirrels in southeast Alaska.

Habitat	Suitability Index	Number per Square Mile
Old-growth forest		
Sitka spruce	1.0	1,280
Western hemlock/ Sitka spruce	0.6	770
Western hemlock	0.4	510
Cedar	0.4	510
Muskeg (noncommercial)	0.3	380
Subalpine	0.2	260
Black cottonwood	0.2	260
Clearcut	0.1	130
Pole timber	0.3	380
Young growth sawtimber	0.8	1,020
Other	0.0	0

HABITAT CAPABILITY MODEL FOR BALD EAGLES IN SOUTHEAST ALASKA: NESTING HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of nesting bald eagles (Haliaeetus leucocephalus). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Only the nesting habitat of bald eagles is evaluated through this model. Limited information is available on the winter habitats and movements of bald eagles in southeast Alaska so this aspect is not considered. Excerpts from the publication on the status and biology of bald eagle populations in southeast Alaska by Sidle et al. (1986) are used extensively throughout this paper.

Habitat Use Information

Coastal Habitats

The majority of bald eagles in southeast Alaska nest in coniferous forest habitats along the coastline and associated saltwater inlets of southeast Alaska. Bald eagles prefer to nest adjacent to the coast, where they forage for fish, waterbirds, marine invertebrates, and drifting carrion (Kalmbach et al. 1964; Ofelt 1975). Of 3,850 nests surveyed by Hodges and Robards (1982), 92 percent occurred within 300 feet (90 m) of the shoreline. The average distance from nest to shoreline was 120 feet (37 m). Not all types of shoreline appeared equally acceptable to nesting bald eagles. The majority of nests examined (55 percent) were located along inland seas or broad channels. Nesting along saltwater bays was also common (31 percent). Brackish lagoons, open seas, and narrow saltwater channels without tidal currents were used less frequently. Nests commonly occurred on prominent points of land, small islands, narrow passages with tidal currents, and shorelines exposed to large bodies of water, especially those facing into prevailing winds. These situations may provide the best opportunities for foraging over open water and on tidal flats.

Almost all nesting along the coast in southeast Alaska occurs in old-growth stands located within a well-forested landscape. Survey results indicate that disturbed areas (e.g., clearcuts) without sufficient numbers of remnant old-growth trees are avoided by bald eagles (Hodges et al. 1984). Sitka spruce (Picea sitchensis) comprised 78 percent of 3,850 nest sites evaluated by Hodges and Robards (1982). Sitka spruce trees are usually taller and have a stronger

top and branches than western hemlock (Tsuga heterophylla), which comprised 20 percent of the nest sites. Western redcedar (Thuja plicata) was used in only 2 percent of the nests observed. Large, old trees are most commonly selected by bald eagles for nesting. Nest trees examined by Hodges and Robards (1982) averaged 97 feet (30 m) in height and 3.6 feet (1.1 m) in diameter. These measurements suggest that typical nest trees are at least 400 to 500 years old.

Nests observed during the annual productivity surveys in the Seymour Canal Eagle Management Area suggest that the number of new nests built each year approximates the number lost each year (Hodges 1982). Annual rate of nest loss in Seymour Canal is about 5 percent, which implies an average nest life of 20 years. Assuming this area is typical of southeast Alaska, about 50 percent of the original nests in a given area will be lost aer 13 years. The main causes of nest loss are nests blowing out of trees and nest trees succumbing to windthrow (Hodges 1982).

Perching sites are an important component of bald eagle nesting habitat. Bald eagles perch on tall trees and snags to scan the water and shore for food. They also use these vantage points to protect their nests from avian predators. Tall trees having a clear view of the nest and surrounding water provide the most valuable perching sites. Other functions of perch trees have been suggested. These include: 1) sites for consuming prey, 2) sites from which to display to attract potential mates, and 3) conspicuous posts from which territory occupation may be signaled (Stalmaster et al. 1985).

Inland Habitats

The mainland of southeast Alaska contains 12 major river systems and several minor river systems. These rivers are generally of glacial origin and flow in braided patterns over wide gravel beds on the valley floors. The more stable portions of these river bottomlands support stands of large, mature black cottonwood (Populus trichocarpa) trees that are used as nesting, roosting, and perching habitat by bald eagles (Hodges 1979; Hughes 1981).

Hodges (1979) found nest densities to be highly variable among the rivers surveyed in southeast Alaska. The use of river habitats for nesting may fluctuate from year to year in response to food abundance and weather conditions. The large mainland river systems of southeast Alaska supported an estimated 200 bald eagle nests (Hodges 1979). Occasional nests also occur along major streams and lakes of the larger islands in southeast Alaska (e.g., Prince of Wales Island) (Hodges and Robards 1982).

Habitat Model

A number of factors have been identified as influencing the selection of nesting sites by bald eagles. However,

adequate nest sites and proximity to water appear to be most critical in determining the value of a stand as nesting habitat for bald eagles. Characteristics associated with type of water body and shoreline are not easily represented in the Geographic Information System database. For these reasons emphasis in this model is placed on overstory, successional, and spatial relationships between bald eagles and their habitat.

Coastal Habitats

Sitka spruce trees typically dominate the old-growth forests of southeast Alaska. These trees provide the structure preferred by bald eagles for nest placement. Nearly 80 percent of 3,850 nest trees examined in southeast Alaska were Sitka spruce (Hodges and Robards 1982). Although approximately 20 percent of nest trees were western hemlock, this species is not preferred because it is generally shorter than Sitka spruce, is less persistent, and the terminal branching is much finer (Grubb 1976). Western redcedar, found throughout southern southeast Alaska, is rarely used as a nest tree because of it fine branching structure.

The value of a stand as bald eagle nesting habitat is, therefore, directly related to forest structure and composition. Sites with tall, well-developed canopy structure and a high percentage of Sitka spruce in the overstory will be preferred by bald eagles (Hodges and Robards 1982). Dominant overstory species of a stand may be used to represent the availability of preferred nest sites (Table 1). Stands with timber volumes greater than 8 MBF per acre generally provide nesting sites suitable for bald eagles. The suitability of open, muskeg forests (characterized by timber volumes of 8 MBF per acre or less) as bald eagle nesting habitat is limited. Nonforested stands do not offer any opportunity for bald eagles to nest.

The average age of nest trees in southeast Alaska exceeds 400 years (Robards and Hodges 1976). Bald eagles in southeast Alaska prefer to nest in continuous stands of old-growth rather than in narrow leave strips of old-growth trees. Nests of bald eagles have not been found in second growth trees in southeast Alaska. These relationships indicate a preference by bald eagles for stands of old-growth forest and avoidance of second growth stands and nonforested stands (Robards and Hodges 1976) (Table 1).

Bald eagles along the coast in southeast Alaska have a strong propensity to nest close to saltwater. Corr (1974) found a mean distance of nest tree to shore to be 100 feet (30 m) near Petersburg. Hodges and Robards (1982) reported the average distance of nests to the waterfront throughout southeast Alaska was 120 feet (37 m), with 92 percent of nest trees within 300 feet (90 m) and 98 percent within 600

feet (183 m) of the shoreline. Therefore, as distance from the shoreline increases, the value of the habitat for bald eagles decreases dramatically (Table 1).

Inland Habitats

Nests of bald eagles observed along rivers and lakes in southeast Alaska were located within the associated riparian zone (Hodges 1979). Riparian habitats have been described on the Tongass National Forest on the basis of channel type, soils, land form, and vegetation (Martin et al. 1986). Nesting habitats of bald eagles is assumed to be restricted to these riparian areas (Table 2).

Availability of fish as food for bald eagles is assumed to be a prime factor in the suitability as a riparian area as habitat for bald eagles. Streams that produce anadromous fish (i.e., class I) are assumed to be better foraging habitat for bald eagles than streams that only produce resident fish (e.g., cutthroat trout [*Salmo clarki*]) (i.e., class II). Streams that do not support any fish (i.e., class III) are assumed to not have any value as foraging habitat for bald eagles. Lakes greater than 50 acres (20 ha) are assumed to support more prey for bald eagles and provide more foraging opportunities than smaller lakes. Lakes and streams above 800 feet (245 m) elevation are assumed to provide less of a prey base than those below 800 feet (245 m) (Table 2). Anadromous fish are less likely to be present at higher elevations. Weather conditions in the spring are also less conducive to successful nesting at elevations above 800 feet (245 m).

The vegetation and successional stage relationships established for bald eagles in coastal habitats are assumed to also apply to lake and stream habitats (Table 2).

Habitat Capability Coastal Habitats

Densities of active bald eagle nests in optimum habitat (i.e., Seymour Canal Eagle Management Area) have been estimated to be 0.50 active nests/mile (Hodges 1982). The following calculations provide an estimate of the area of bald eagle habitat per linear measurement of coastline.

$$\frac{5280 \text{ ft(1 mi)} \times 500 \text{ ft (beach fringe)}}{43560 \text{ ft}^2\text{/ac}} = 60 \text{ ac/mi of beach fringe}$$

Five hundred feet (150 m) is used as the depth of beach fringe because most bald eagle nests occur within this zone.

0.50 active nests/mile of coastline = 0.50 active nests/60 ac = 5 active nests/mi^2.

5 active nests/mi^2 = 10 breeding bald eagles/mi^2.

The mean proportion of adult bald eagles breeding in southeast Alaska from 1970 through 1979 = 0.38 (Hansen and Hodges 1985).

$\frac{10 \text{ breeding bald eagles/mi}^2}{0.38}$ = 26 adult bald eagles/mi^2 of optimum coastal habitat (i.e., HSI =1.0)

Unsuitable habitat (i.e., HSI = 0.0) is assumed to have a density of 0 bald eagles/mi^2. A linear relationship is assumed between bald eagle densities and habitat quality, as defined by HSI values, in order to calculate densities for intermediate HSI values (Table 1).

Inland Habitats

Densities of active bald eagle nests in optimum habitat adjacent to rivers, streams, and lakes (i.e., Chilkat River) have been estimated to be 0.39 active nests/mile (Hodges 1979). The following calculations provide an estimate of the area of bald eagle habitat per linear measurement of shoreline.

$$\frac{5280 \text{ ft (1 mi)} \times 500 \text{ ft(riparian zone)}}{43560 \text{ ft}^2\text{/ac}} = 60 \text{ ac/mi of shoreline}$$

Five hundred feet (150 m) was assumed to be the average width of the riparian zone.

0.39 active nests/mile of shoreline = 0.39 active nests/60 ac = 4 active nests/mi^2.

4 active nests/mi^2 = 8 breeding bald eagles/mi^2.

The mean proportion of adult bald eagles breeding in southeast Alaska from 1970 through 1979 = 0.38 (Hansen and Hodges 1985).

$\frac{8 \text{ breeding bald eagles/mi}^2}{0.38}$ = 21 adult bald eagles/mi^2 of optimum inland habitat (i.e., HSI = 1.0)

Unsuitable habitat (i.e., HSI = 0.0) is assumed to have a density of 0 bald eagles/mi^2. A linear relationship is assumed between bald eagle densities and habitat quality, as defined by HSI values, in order to calculate densities for intermediate HSI values (Table 2).

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on nest locations. This will be done to ensure the model results approximate the results of independent field studies.

Efforts will also be made to verify and perhaps refine the assumed relationships between nest placement and volume class and and between nest placement and forest type.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

Other analyses to be completed on the GIS include determination of the composition of vegetation within 1.) the 330 feet (100 m) buffer zone around identified nest sites and 2.) wider buffer zones.

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Table 1. Capability of coastal habitats to support breeding bald eagles in southeast Alaska.

Habitat Volume Class	Distance from Shore: 0-500 ft Index	0-500 ft #/sq. mi	> 500 ft Index	> 500 ft #/sq. mi
Old-growth forests				
Sitka spruce				
Noncommercial	0.3	8	0.0	0
> 8000 bf/ac[a]	1.0	26	0.0	0
Western hemlock/ Sitka spruce				
Noncommercial	0.2	5	0.0	0
> 8000 bf/ac	0.8	21	0.0	0
Western hemlock				
Noncommercial	0.1	3	0.0	0
> 8000 bf/ac	0.5	13	0.0	0
Other				
Noncommercial	0.0	0	0.0	0
> 8000 bf/ac	0.1	3	0.0	0
Second growth forests	0.0	0	0.0	0
Other	0.0	0	0.0	0

[a]bf/ac = board ft per acre

Table 2. Capability of inland habitats to support breeding bald eagles in southeast Alaska.

Habitat Overstory Species Volume Class Fish Production	Riparian Elevation 0-800 ft Index	Riparian Elevation 0-800 ft #/sq mi	Riparian Elevation > 800 ft Index	Riparian Elevation > 800 ft #/sq mi	Not Riparian Index	Not Riparian #/sq mi
Old-growth forests						
Sitka spruce						
Noncommercial						
Class I stream[a]	0.2	5	0.0	0	0.0	0
Class II stream	0.1	2	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.1	2	0.0	0	0.0	0
Lake >50 ac	0.2	5	0.0	0	0.0	0
>8000 bf/ac[b]						
Class I stream	0.8	21	0.1	2	0.0	0
Class II stream	0.3	8	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.2	5	0.0	0	0.0	0
Lake >50 ac	0.8	21	0.1	2	0.0	0
Western hemlock/ Sitka spruce						
Noncommercial						
Class I stream	0.2	5	0.0	0	0.0	0
Class II stream	0.1	2	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.1	2	0.0	0	0.0	0
Lake >50 ac	0.2	5	0.0	0	0.0	0
>8000 bf/ac						
Class I stream	0.7	17	0.1	2	0.0	0
Class II stream	0.2	5	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.2	5	0.0	0	0.0	0
Lake >50 ac	0.7	17	0.1	2	0.0	0

Table 2 cont. Capability of inland habitats to support breeding bald eagles in southeast Alaska.

Habitat / Overstory Species / Volume Class / Fish Production	Riparian, Elevation, 0-800 ft Index	0-800 ft #/sq mi	> 800 ft Index	> 800 ft #/sq mi	Not Riparian Index	Not Riparian #/sq mi
Western Hemlock						
Noncommercial						
Class I stream	0.1	2	0.0	0	0.0	0
Class II stream	0.1	2	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.0	0	0.0	0	0.0	0
Lake >50 ac	0.1	2	0.0	0	0.0	0
>8000 bf/ac						
Class I stream	0.4	11	0.0	0	0.0	0
Class II stream	0.2	5	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.1	2	0.0	0	0.0	0
Lake >50 ac	0.4	11	0.0	0	0.0	0
Black cottonwood						
Class I stream	0.7	17	0.1	2	0.0	0
Class II stream	0.2	5	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.2	5	0.0	0	0.0	0
Lake >50 ac	0.7	17	0.1	2	0.0	0
Other old-growth						
Noncommercial						
Class I stream	0.0	0	0.0	0	0.0	0
Class II stream	0.0	0	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.0	0	0.0	0	0.0	0
Lake >50 ac	0.0	0	0.0	0	0.0	0
>8000 bf/ac						
Class I stream	0.1	2	0.0	0	0.0	0
Class II stream	0.0	0	0.0	0	0.0	0
Class III stream	0.0	0	0.0	0	0.0	0
Lake <50 ac	0.0	0	0.0	0	0.0	0
Lake >50 ac	0.1	2	0.0	0	0.0	0

Table 2 cont. Capability of inland habitats to support breeding bald eagles in southeast Alaska.

Habitat Overstory Species Volume Class Fish Production	Riparian Elevation 0-800 ft Index	 #/sq mi	 > 800 ft Index	 #/sq mi	 Not Riparian Index	 #/sq mi
Second growth forests	0.0	0	0.0	0	0.0	0
Other habitats	0.0	0	0.0	0	0.0	0

[a] Class I streams support populations of anadromous fish.
Class II streams support populations of resident fish.
Class III streams do not support fish populations.

[b] bf/ac = board ft per acre

HABITAT CAPABILITY MODEL FOR RED-BREASTED SAPSUCKERS IN SOUTHEAST ALASKA: BREEDING HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of red breasted sapsuckers (Sphyrapicus ruber). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Breeding season habitat of red breasted sapsuckers is evaluated in the model. The red breasted sapsucker is considered a keystone species in southeast Alaska in that it is the primary excavator of cavities used by secondary cavity nesters in this area (Sidle and Suring 1986).

The breeding range of the red-breasted sapsucker extends from northern southeastern Alaska through western British Columbia and into western Washington and Oregon (Howell 1952). This bird winters in the coastal portion of its breeding range at least as far north as Prince of Wales Island (Howell 1952, Howell 1953). The distribution of this bird throughout southeast Alaska has been defined as uncommon to common (Kessel 1986, Sidle and Suring 1986).

Habitat Use

A very limited amount of work has been done on the red-breasted sapsucker. However, in a review of sapsuckers Howell (1952) concluded that there is very little difference in the life histories of the four forms. Information provided in studies of the red-naped sapsucker (S. nuchalis), the Williamson's sapsucker (S. thyroideus), and the yellow-bellied sapsucker (S. varius) will be used to provide a basis for the establishment of a habitat model for the red-breasted sapsucker.

Unlike most woodpeckers, sapsuckers feed on numerous items including sap, phloem, insects, and fruit (Tate 1969). Sapsuckers use several techniques to extract sap and phloem tissue from living trees (Tate 1973). They drill vertical columns of holes, horizontal bands of holes, and spiral groups of holes. All of the soft inner bark of trees--(cork cambium, phloem (fibers, rays, sieve tubes, and parenchyma), and cambium--is eaten by sapsuckers as well as sap. Sap is taken by sapsuckers by drinking, when it is concentrated, or by licking the sap with their tongue, from the holes and from the surface of the bark (Foster and Tate 1966). Sap is also transported to the nestlings (Kilham 1977).

Sapsuckers catch insects by foraging on the trunks and limbs of trees and gleaning them from the bark (Kilham 1977).

They do not excavate bark for food (Stallcup 1968). They also take insects from leaves and occasionally catch them in mid air (Raphael and White 1984). Often a sapsucker will obtain a mouthful of insects, fly to the feeding tree, work the insects into the wet sap, and then either consume them or take them to the young (Kilham 1962, Foster and Tate 1966). A number of organisms, including insects, are attracted to the holes the sapsucker drills for sap. This provides a source of insects for the sapsuckers to consume or take to their young. One or 2 live trees within 300 feet (90 m) of the nest site serve as the food source throughout the breeding season (Howell 1952, Bull et al. 1986).

Nest sites of sapsuckers appear to be chosen for their proximity to suitable foraging habitat (Crockett and Hadow 1975) and for the characteristics of the individual nest tree (Bull et al. 1986). Sapsuckers always nested in or adjacent to open stands during a study in Colorado (Crockett and Hadow 1975). Breeding territories are established by sapsuckers that encompass nesting and feeding sites (Crockett 1975). Territories are often occupied by the same individuals from year to year. Territory size approximates 10 acres (4 ha) for this species (Jackman 1974).

Reported diameters at breast height of individual nest trees within territories range from 10 inches (25 cm) to 32 inches (80 cm) (Bull 1978, Raphael and White 1984). Although sapsuckers use smaller diameter trees, productivity of birds appears to increase if they are able to use larger diameter trees. Large diameter trees and snags allow space for excavation of larger diameter cavities. Clutch size of hole-nesting passerines has been shown to increase with increased cavity diameter (Karlson and Nilsson 1977). Larger diameter trees also provide thicker insulation around the nest cavity (Raphael and White 1984).

Sapsuckers excavate a new hole every year, possibly because of the accumulation of fecal matter (Kilham 1962, Kilham 1977). Although sapsuckers excavate only one nest hole per year, they may begin excavations on several trees before a final one is selected (Howell 1952, Jackman 1974). Often a tree which was used in a previous year is used again (Howell 1952). Nest trees are usually alive or have been dead less than 3 years (Bull et al. 1986). Since the sapsucker is a poor excavator (Spring 1986), it usually nests in trees with advanced decay in the heartwood (Shigo and Kilham 1968, Erskine and McLaren 1972, Miller et al. 1979).

Habitat Model

Hughes (1985) characterized red breasted sapsuckers as an early returning migrant on his study area in southeast Alaska. During March, these birds were closely associated with old-growth stands of western hemlock (Tsuga heterophylla) and Sitka spruce (Picea sitchensis). He found that red breasted sapsuckers were approximately twice as abundant in low volume (i.e., 8-20,000 board ft/ac)

old-growth stands as in mid and high volume stands (i.e., 20-30,000 board ft/ac and 30,000+ board ft/ac). Low volume stands provide the open habitat that has been reported as preferred by sapsuckers elsewhere (Crockett and Hadow 1975). Although mean snag diameters (i.e., 16 inches [40 cm]) are smaller within the low volume stands than in mid and high volume stands (Hughes 1985) they are within the range of snag diameters reported as used by sapsuckers (Bull 1978, Raphael and White 1984).

The population densities reported by Hughes (1985) for red breasted sapsuckers are probably not adequate indicators of habitat preference during the breeding season. These densities were determined during late winter and early spring which may have been before breeding territories were established. Presence of cavities is probably a better indicator of habitat preference by red breasted sapsuckers. The number of snags with excavated cavities per plot by volume class was calculated from data provided in Hughes (1985) (Table 1). These values were used to provide an index to habitat quality (Table 2). Muskeg forests generally have small diameter, widely spaced trees that are not preferred by woodpeckers. Black cottonwood (*Populus trichocorpa*) forests may provide suitable nesting sites but foraging opportunities may be limited in deciduous trees early in the year before sap is available so their value is decreased slightly (Tate 1973). Red alder (*Alnus rubra*) forests tend to have small diameter trees with limited nest sites available. This is reflected in their low suitability index values. Adequate nest sites are unavailable in other habitats in southeast Alaska (Hughes 1985).

Habitat Capability Hughes (1985) reported an early spring density of 134 red breasted sapsuckers/mi^2 (52/km^2) in low volume old-growth stands. Densities of 80 and 67 red breasted sapsuckers/mi^2 (31 and 26/km^2) were observed for mid and high volume old-growth stands, respectively. The density reported for low volume old-growth is assumed to be the number of birds supported in optimum habitat (i.e., suitability index = 1.0) (Table 1). The densities for all other habitats are calculated using this value as a base.

Verification This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more

complete information is available on red breasted sapsuckers. This will be done to ensure the model results approximate the results of field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Development of suitability index values by volume class for red breasted sapsuckers in southeast Alaska[a].

Volume Class	Number of Plots	Number of Snags With Cavities	Snags with Cavities per Plot
30,000+ bf/ac	40	25	0.63
20-30,000 bf/ac	24	20	0.83
8-20,000 bf/ac	31	31	1.00

a Data were taken from Hughes (1985).

b bf/ac = board foot/acre; Hughes (1985) classified forest stands with slightly different volume classes (i.e., 40,000 bf/ac, 25,000 - 40,000 bf/ac, and 8 - 25,000 bf/ac). The volume classes used here are those in the Geographic Information System database being developed for southeast Alaska.

Table 2. Capability of habitats to support red-breasted sapsuckers during spring and summer in southeast Alaska.

Habitat	Suitability Index	Number per Square Mile[a]
Old-growth forest		
Western hemlock, Sitka spruce, cedar, W. hemlock/spruce		
30,000+ bf/ac[b]	0.6	80
20-30,000 bf/ac	0.8	107
8-20,000 bf/ac	1.0	134
Muskeg (noncommercial)	0.1	13
Subalpine	0.3	40
Black cottonwood	0.8	107
Red alder	0.2	27
Clearcut (0-25 yrs)	0.0	0
Second growth (> 25 yrs)	0.0	0
Other	0.0	0

[a] Densities are calculated from Hughes (1985) (see Table 1).

[b] bf/ac = board foot/acre; Hughes (1985) classified forest stands with slightly different volume classes (i.e., 40,000 bf/ac, 25,000 - 40,000 bf/ac, and 8 - 25,000 bf/ac). The volume classes used here are those in the Geographic Information System database being developed for southeast Alaska.

HABITAT CAPABILITY MODEL FOR HAIRY WOODPECKERS IN SOUTHEAST ALASKA: WINTER HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of hairy woodpeckers (Picoides villosus). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Winter range of hairy woopeckers is evaluated in the model.

Work by Raphael and White (1984) suggested that an important constraint on cavity nesting birds, including hairy woodpeckers, is the availability of suitable winter habitat for roosting and foraging. Haapanen (1965:190) stated that "severe weather and lack of food is the most decisive factor limiting populations of the (hole nesting) species wintering in conifer stands." Manuwal and Huff (1987) also observed that the most impact from intensive timber management will be on resident species that require tree cavities.

The range of the hairy woodpecker extends from Alaska, through most of Canada, and throughout the lower 48 states and Mexico (Robbins et al. 1966). This bird is considered an uncommon, permanent resident throughout southeast Alaska (Sidle and Suring 1986). The hairy woodpecker is associated with snags and partially dead trees for foraging and nesting and represents cavity nesters. Hairy woodpeckers are generally declining in numbers in the Pacific Northwest and deserve special attention (Morrison and Morrison 1983).

Habitat Use

The diet of hairy woodpeckers consists primarily of adult and larval beetles, ants, and caterpillars (Beal 1911, Bent 1939). Animal matter makes up approximately 80 percent of this woodpeckers diet which is supplemented with fruit, nuts, and seeds (Martin et al. 1951, Stallcup 1969, Hardin and Evans 1977). Hairy woodpeckers often concentrate in areas of insect outbreaks in response to the increased food available (Koplin 1969). Their numbers also decline significantly once the available insect prey densities decline.

Mature, uneven-aged timber stands with many dead snags receive substantial use for foraging by hairy woodpeckers (Conner and Crawford 1974). They generally feed on insects on the surfaces of snags, the dead parts of live trees, and occasionally live trees during the summer (Yeager 1955, Conner and Crawford 1974, Conner 1979a). Hairy woodpeckers forage during the summer by pecking on the foraging

substitute without penetrating the subcambium (Conner 1979a). During the winter, hairy woodpeckers increase their use of large limbs and trunks of dead trees and dead portions of live trees (Conner 1980, Morrison et al. 1985). They also use foraging methods that penetrated tree surfaces deeper and disturbed the substrate more than during milder seasons (Conner 1979a). In the winter when ants and insect pupae are under the bark or inside the cambium and other insects are not present in large numbers on the surface of trees, woodpeckers must excavate in search of prey (Conner 1979a).

Hairy woodpeckers have been observed foraging on snags and on logs and branches left as slash in recent clearcuts (i.e., 1-5 years old) (Conner and Crawford 1974, Dickson et al. 1983). However, these birds immediately returned to the adjacent uncut forest after foraging. These habitats are generally unavailable during the winter because of snow or provide unsuitable microhabitats because of cold weather.

Male and female hairy woodpeckers tend to segregate their foraging niches by utilizing different substrates and different techniques (Kisiel 1972). Females have been observed to forage more frequently on branches and live trees than males (Lynch 1978). The smaller-billed females tend to forage superficially in these areas by gleaning or scaling bark in contrast to the deep excavations into wood performed by males (Kisiel 1972, Morrison and With 1987).

The females establish territories in the fall and attract males to these areas in the spring (Shelley 1933, Kilham 1966, Kilham 1969). Territories tend to be established with consideration to availability of nest sites rather than foraging opportunities. Hairy woodpeckers nest in both live and dead trees but all nest trees in one study were infected by heart rot (Conner and Adkisson 1976).

Hairy woodpeckers and associated secondary cavity nesters generally nest in large trees (Kelleher 1963, Jackson 1975, McClelland 1977, Scott et al. 1977, Mannan et al. 1980, Zarnowitz and Manuwal 1985). Smaller diameter trees provide suboptimal nest sites with the effect of reducing reproductive success and eventually reducing population sizes (Dennis 1969, Conner 1979b, Raphael and White 1984). Sizes of nest trees reported as used by hairy woodpeckers ranges from 12 to 23 in diameter at breast height (30 to 58 cm) (Evans and Conner 1979, Zarnowitz and Manuwal 1985).

Hairy woodpeckers have been reported to prefer habitats with high tree basal area, tall canopy, large diameter trees, and nest cavities that are high above the ground (Conner and Adkisson 1977). During the winter, hairy woodpeckers become much more specialized in the habitats they select (Conner 1981). Habitats used during the winter were characterized by a high, heavy canopy cover provided by large, widely

spaced trees and with cover in the subcanopy (Morrison et al. 1986).

Habitat Model

Hughes (1985) found hairy woodpeckers associated with old-growth stands of western hemlock (*Tsuga heterophylla*) and Sitka spruce (*Picea sitchensis*) in southeast Alaska. Old-growth forests with greater than 30,000 board ft/ac (i.e., high volume) were preferred (Table 1). These forests provide the components identified with high quality habitat for hairy woodpeckers. Although approximately 0.2 of the number of hairy woodpeckers observed in high volume stands were observed in low and mid volume stands (i.e., 8-20,000 board ft/ac and 20-30,000 board ft/ac respectively) mid volume stands were assigned a higher index value because of the greater availability of snags and other suitable habitat conditions.

Muskeg, or noncommercial, forests generally have small diameter, widely spaced trees that are not preferred by woodpeckers. Black cottonwood (*Populus trichocarpa*) forests may provide suitable nesting sites but they provide limited winter habitat. Early clearcuts may provide some foraging opportunities but these habitats are generally unavailable to hairy woodpeckers in the winter. During the regeneration stage of even-aged timber management, forests have little potential for hairy woodpecker habitat (Conner et al. 1975). Snags that develop in second growth stands are not used by cavity nesters because they are generally too small for excavation (Chadwick et al. 1986). Remnant snags in second growth stands receive very little use by woodpeckers because of the high stem density of trees which is unsuitable for woodpeckers (Mannan et al. 1980).

Habitat Capability

Hughes (1985) reported a winter density of 32 hairy woodpeckers/mi^2 (12/km^2) in high volume old-growth stands and a density of 5 hairy woodpeckers/mi^2 (2/km^2) in low and mid volume old-growth stands (Table 1). Zarnowitz and Manuwal (1985) reported significant higher densities in old-growth stands on the west side of the Olympic Peninsula in Washington State (i.e., 80/mi^2 [32/km^2]).

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more

complete information is available on winter densities of hairy woodpeckers. This will be done to ensure the model results approximate the results of field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Capability of habitats to support hairy woodpeckers during the winter in southeast Alaska.

Habitat	Suitability Index	Number per Square mile[a]
Old-growth forest		
Western hemlock, Sitka spruce, cedar, W. hemlock/spruce		
30,000+ bf/ac[b]	1.0	32
20-30,000 bf/ac	0.6	19
8-20,000 bf/ac	0.2	6
Noncommercial	0.0	0
Subalpine	0.0	0
Black cottonwood	0.1	3
Clearcut (0-25 yrs)	0.0	0
Second growth (> 25 yrs)	0.0	0
Nonforest	0.0	0
Other	0.0	0

[a] Densities are from Hughes (1985).

[b] bf/ac = board foot/acre; Hughes (1985) classified forest stands with slightly different volume classes (i.e., 40,000+ bf/ac, 25,000 - 40,000 bf/ac, and 8 - 25,000 bf/ac). The volume classes used in this model are those available in the Geographic Information System database for southeast Alaska.

HABITAT CAPABILITY MODEL FOR BROWN CREEPERS IN SOUTHEAST ALASKA: WINTER HABITAT

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the current Forest plan. These models will be used to assist in the evaluation of effects of proposed land management activities on wildlife habitats and populations. The objective of this model is to estimate the capability of habitats in southeast Alaska to support populations of brown creepers (*Certhia americana*). The model provides an evaluation of habitat quality which is assumed to be related to long-term carrying capacity. The model is developed to be applied throughout southeast Alaska. Winter range of brown creepers is evaluated in the model. Work by Raphael and White (1984) suggested that an important constraint on cavity nesting birds, including brown creepers, is the availability of suitable winter habitat for roosting and foraging. Haapanen (1965:190) stated that "severe weather and lack of food is the most decisive factor limiting populations of the (hole nesting) species wintering in conifer stands." Manuwal and Huff (1987) also observed that the most impact from intensive timber management will be on resident species that require tree cavities.

The range of the brown creeper extends from south central Alaska, through southeast Alaska, into the western Canadian Provinces, across southern Canada, and throughout the lower 48 states and northern Mexico (Robbins et al. 1966). This bird is considered an uncommon, permanent resident throughout southeast Alaska (Sidle and Suring 1986). The brown creeper is associated with large, old-age trees and represents the old-growth forest community.

Habitat Use

The diet of brown creepers consists of larvae, pupae, and eggs of insects gleaned from the crevices of bark, spiders, other small invertebrates, and occasionally seeds (Pearson 1923, Reilly 1968). The brown creeper uses its long (0.6 inches [15 mm]), slightly decurved bill to pick food items from cracks and crevices in the bark and off the bark surface without disturbing the bark (Davis 1978). This bird typically flies to the base of a tree and searches for food on the bark in an upward spiral pattern (Franzreb 1985).

Large diameter trees are preferred because a bird can feed longer on a large tree and capture more prey per visit (Raphael and White 1984, Airola and Barrett 1985). Larger diameter trees produce more beetle larvae per unit surface area than smaller trees (Parker and Stevens 1979). Jackson (1979) also showed that furrowed bark of larger trees supported larger numbers of insects than did the smoother bark of smaller trees. Brown creepers and other bark foraging birds also select larger diameter trees as foraging sites during cold, windy weather to lessen their exposure (Willson 1970, Grubb 1975, Webber 1986).

Brown creepers forage almost exclusively on trunks of trees in conifer forests (Morse 1970). They tend to move to another tree when the branch density increases to a point that the maneuverability of the bird is impaired (Franzreb 1985). The birds select tall trees that provide more room for foraging before branches are encountered. The size of a tree is more of a determinant in the selection of foraging sites than the species of a tree. The abundance of large, course-barked trees and the length of vertical foraging height appears to affect the territory size of brown creepers (Apfelbaum and Haney 1977). The area necessary to support the birds increased as the number of large, tall trees decreased. Brown creepers also spend the majority of their time foraging on live trees or on the live parts of trees rather than on dead trees (Raphael and White 1984, Morrison et al. 1987).

The brown creeper places its nest between the bark and trunk of a dead or dying tree where the bark has pulled away from the tree (Davis 1978). All of the brown creeper nests located by Davis (1978) and Raphael and White (1984) were in spaces behind the bark. However, Kelleher (1963) found brown creepers using abandoned woodpecker nest cavities on Vancouver Island, British Columbia. Large snags are also important as roosting sites for brown creepers (Walsberg 1986).

Habitat Model

Hughes (1985) found brown creepers associated with old-growth stands of western hemlock (Tsuga heterophylla) and Sitka spruce (Picea sitchensis) in southeast Alaska. old-growth forest with greater than 30,000 board ft/acre (i.e., high volume) were highly preferred. These forests provide the components identified with high quality habitat for brown creepers (i.e., large diameter, tall trees). Such forest stands are considered optimum habitat for brown creepers (Table 1). Slightly more than 0.1 of the number of brown creepers observed in stands with 30,000+ board ft/acre were observed in stands with 20-30,000 board ft/acre (i.e., mid volume) (Hughes 1985). Other habitats in southeast Alaska were not considered to provide habitat for brown creepers. Studies of the response of birds to timber harvest have shown significant reductions of populations of brown creepers from old-growth forests to clearcuts (Franzreb 1977, Franzreb and Ohmart 1978, Scott and Gottfried 1983, Medin 1985).

Habitat Capability

Hughes (1985) reported a winter density of 96 brown creepers/mi^2 (37 brown creepers/km^2) in high volume old-growth stands and a density of 13 brown creepers/mi^2 (5 brown creepers/km^2) in mid volume stands (Table 1). Buchner et al. (1975) reported similar densities for breeding brown creepers on Vancouver Island in old-growth forests (i.e., 90 and 64 birds/mi^2 [36 and 24 birds/km^2]). A similar average density (i.e., 74 brown creepers/mi^2 [29 brown creepers/km^2]) was also reported

from mature forests in northeast California (Raphael and White 1984).

Verification

This draft of the model has received limited review by biologists from the Alaska Department of Fish and Game, US Fish and Wildlife Service, and USDA Forest Service located in southeast Alaska.

The next step in verification of the model will be implementation in a pilot test of the Geographic Information System (GIS) database currently being developed for southeast Alaska by the USDA Forest Service. The purpose of this limited test is to ensure that the model provides reasonable results on the pilot test area. Once the complete GIS database is available for use the model will be run on other areas in southeast Alaska for which more complete information is available on brown creepers. This will be done to ensure the model results approximate the results of field studies.

Once these aspects of verification are completed reviews of the model will be requested from species experts not associated with development of the model.

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Table 1. Capability of habitats to support brown creepers during the winter in southeast Alaska.

Habitat	Suitability Index	Number per Square mile[a]
Old-growth forest		
Western hemlock, Sitka spruce, cedar, W. hemlock/spruce		
30,000+ bf/ac[b]	1.0	96
20-30,000 bf/ac	0.1	3
8-20,000 bf/ac	0.0	0
Muskeg	0.0	0
Subalpine	0.0	0
Black cottonwood	0.0	0
Clearcut	0.0	0
Second growth	0.0	0
Other	0.0	0

[a] Densities are from Hughes (1985).

[b] bf/ac = board foot/acre; Hughes (1985) classified forest stands with slightly different volume classes (i.e., 40,000+ bf/ac, 25,000 - 40,000 bf/ac, and 8 - 25,000 bf/ac). The volume classes used here are those present in the Geographic Information System being developed for southeast Alaska.

HABITAT CAPABILITY MODEL FOR DOLLY VARDEN CHAR AND COHO AND PINK SALMON

Introduction

Habitat capability models are needed for each of the management indicator species selected for use in the revision of the Tongass Land Management Plan. To represent aquatic species, three management indicator species have been selected: pink salmon (Oncorhynchus gorbuscha), to represent anadromous fish whose populations are generally limited by spawning habitat availability; coho salmon (Oncorhynchus kisutch), to represent anadromous fish whose populations are generally limited by rearing habitat availability; and Dolly Varden char (Salvelinus malma), to represent habitat required by non-anadromous species. The historic range of coho and pink salmon and Dolly Varden char includes all of Southeast Alaska and the Tongass National Forest.

Models are used to assist in the evaluation of effects of current and proposed land management activities on fish and wildlife habitats and populations. The cumulative effects of land management activities are also evaluated through the use of models. The objectives of the models described are to estimate the capability of habitats in southeast Alaska to support populations of Dolly Varden char and coho salmon and to predict changes in their capability based on differing land management strategies. The pink salmon model, which is based on different attributes than the Dolly Varden or coho models, is covered near the end of this section.

Habitat Capability

Habitat capability is the carrying capacity or the maximum numbers of fish the habitat can produce, whereas the population is the actual number of fish present at a given time. Populations tend to fluctuate naturally due to a wide range of factors, including harvest, climate, and species interactions, while habitat capability tends to remain relatively constant. Populations of coho salmon in Southeast Alaska have varied dramatically during the past 100 years, as evidenced by the commercial salmon harvests for coho salmon. The peak annual harvest occurred in 1986 (as of 1988), the peak 10 year average in 1946, and the peak 25 year average in 1939. The recent harvest trends of the 10 and 25 year averages has been upward. There is no evidence that habitat capability has varied as dramatically as the populations have over the same time period.

Since populations of fish fluctuate greatly due to a variety of factors including fish harvest, off-shore survival, and on-shore survival, effects of forest management on fish numbers can be very difficult to distinguish. This has led to the formulation of habitat capability models.

Habitat capability, for fish, is measured in smolts for anadromous fish and in numbers of fish for resident species (fish that remain in freshwaters their entire life). Smolts

are the "final" output from National Forest system lands to the ocean. The Forest Service has very little control of, or effect on, fish survival once they leave the National Forest boundary. Even in freshwaters, habitat capability can vary widely year to year based on climatic events, such as severe winter freezing or summer drought.

The evaluations for coho salmon and Dolly Varden char include two steps. First, the potential habitat capability of Forest habitats is estimated. The second step estimates the effects of management activities, such as timber harvest, on the potential habitat capability.

Bases for models

The models developed are based on the channel type/stream class inventory on the Tongass National Forest. Individual channel types have fairly consistent physical and biological characteristics. The channel types provide a system to inventory the amount and quality of fish habitat and can be used to predict their physical response and sensitivity to different management activities. These models assume a relationship between fish habitat capability and stream physical characteristics (channel type). Streams located in the lower portions of a watershed or at tidewater (the C and E channels) typically have the highest capability. Mid-watershed channels (B channels) generally have a lower capability, while the highest gradient channels in the upper portion of the watershed (A channels) have the lowest productivity. The relationship between productivity of the B, C and E channels may change seasonally.

Steve Paustian (Tongass National Forest, Chatham Area, Sitka) developed estimates of smolt habitat capability for the old-growth condition, based on all population estimates that could be found and attributed to a specific stream channel type in Southeast Alaska. The population estimates were made by National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Alaska Department of Fish and Game, and the USDA Forest Service, including the Forestry Sciences Laboratory of the Pacific Northwest Forest and Range Experiment Station. For each location, where population estimates were made, the channel type was determined. Further documentation on the development of this data and correlation to channel type is in preparation by Paustian.

One important consideration about the population estimates for each channel type is that they were made using data collected from streams in old growth, but not necessarily in a fully seeded state. No assumptions were made about what percentage of full seeding the empirical data represents. Therefore it is possible that the population estimates are, in fact, substantial underestimates of full habitat capability.

Work by Dolloff and Reeves[1] has shown that these channel type/fish habitat relationships may not be statistically valid when considering a limited data set (the relationship between only specific channel types). However, the group participating in this modeling effort was of the opinion that there is a relationship between channel type and fish habitat capability and that this relationship is a viable predictor of capability.

In addition to channel type, streams have been categorized by stream class. Three classes have been identified: I, II, and III. These stream classes correspond to the Aquatic Habitat Management Units identified in the Forest Service's Aquatic Habitat Management Handbook and the Fish Habitat Management Units described in the Alaska Regional Guide. They are defined as follows:

Class I Streams with anadromous (fish ascending from oceans to breed in freshwater) or adfluvial (fish ascending from freshwater lakes to breed in streams) lake and stream habitat. Also included is the habitat upstream from migration barriers known to be reasonable enhancement opportunities for anadromous fish and habitat with high value resident sport fish populations.

Class II Streams with resident fish populations and generally steep (often 6-15 percent) gradient (can also include streams from 0-5 percent gradient where no anadromous fish occur). These populations have limited sport fisheries values. These streams generally occur upstream of migration barriers or are steep gradient streams with other habitat features that preclude anadromous fish use.

Class III Streams with no fish populations but have potential water quality influence on the downstream aquatic habitat.

In the context of fish modeling, stream classes are used: 1) to establish the number of miles of different streams which provide anadromous and resident fish habitat, and 2) to help quantify the amount of timber harvest available from the riparian area resulting from the application of different management prescriptions and alternatives.

The habitat capability models are in two parts: the capability model that indicates the numbers of fish that the habitat could produce in the pristine, old-growth condition, without any manipulation, and the effects model that predicts the revised capability based on habitat changes. The effects model can be used to predict changes into the future.

Models

Murphy et al.[2] and Heifetz et al.[3] indicate that coho salmon and Dolly Varden char production are correlated to woody debris and pool volume in streams in southeast Alaska. The pool volume is largely a function of woody debris, where woody debris is present. Other in-stream structure also forms pools and contribute to production capability, especially for coho salmon. Murphy et al. shows that Dolly Varden correlation with instream debris is .77 and with pool volume .30, leading to the conclusion that instream debris, per se, may be more important than just pool volume. For coho salmon, the correlation with instream debris is .56 and with pool volume is .79, leading to the conclusion that pool volume may be more important than instream debris, although instream debris to some degree is correlated with pool volume. This model, then, shows fish habitat capability changes based on pools, with the changes in pools based on those pools dependent on their formation by large woody debris.

When considering woody debris, the concept of the presence of a "key piece" of woody debris which holds other woody debris in place is used. The key piece will contribute to the formation of pools, by holding smaller pieces in place and forming small debris dams. If the key piece is present, then sufficient other size classes of wood are retained to provide for sustained, functioning woody debris. Not only will the debris form pools, but it will also provide other necessary functions of woody debris. For all streams, except C1 and C3 channel types, the modeling group recognized that typically a 24 inch log greater than 10 ft in length was the key piece size. For the large C1 and C3 channel types, a 36 inch piece is the key size (greater than 10 ft). The modeling group recognized that some stream channels may have variations on the key piece size, but that this information is not now available.

The model depends on an input-output model, where:

> **Total woody debris (key pieces) at time t+1 = woody debris at time t plus additional woody debris added over the time from t to t+1 minus the woody debris lost over the time from t to t+1**
>
> **or**
>
> **woody debris$_{t+1}$ = woody debris$_t$ + additional debris (t to t+1) - lost debris (t to t+1)**

In old growth, where theoretically an equilibrium state exists, input and output of debris are assumed constant. In the managed state, where stream-side timber harvest changes the input rate of debris, this relationship will change. So, for this model, it is only necessary tocalculate the input rate from time t to t+1 of second growth, versus the

output during the same period of time under each management regime (prescription).

Output rate

The output, or loss, of wood has been estimated[4] as the exponential function e^{-kt} where k is a constant rate of decay (called decay but which can include biological decay, loss of material due to grinding of rocks, and other natural events) and t is the time period from time "t" to time "t+1". The constant rate of decay is estimated from empirical data collected in old growth stream habitats from various channel types. Different channel types would be expected to exhibit different rates of decay due to their different morphologies. High gradient, relatively sterile streams may have a lower biological decay rate than a low gradient, slow moving stream, but would be expected to have a greater rate of material loss due to bedload erosion.

Estimates for the different channel types of the constant "k" were obtained from Murphy[5] The output portion of the model assumes that a large woody debris "key piece" provides instream benefits throughout its entire period of decay. In fact, there is some point at which a piece of large woody debris has decayed to such a small size that it no longer functions as a key piece (and, following further decay, that piece no longer functions as any size of large woody debris).

Input rate

Woody debris input is somewhat more complex to calculate than output, due to the variable nature of streamside forest productivity.

To calculate the input rate of woody debris in second growth, as discussed previously, it is first assumed that the decay rate in streams (removal rate) in old growth is equal to the input rate in old growth. This is a reasonable assumption because old-growth is in a steady state, with essentially a constant standing volume, rate of decay and accumulation of woody debris on the ground. Based on this assumption, when the input rate for large woody debris changes in second growth, as compared to old-growth, the effect of this change can be expected to be proportional to the change in input rates.

To calculate the input rate (IR) of trees of key piece size (24 or 36 inch trees, 24" used in the sample below) in second growth, per year per foot of stream, the following relationship is used:

Input Rate (IR) 2nd Growth (trees/yr/ft) =

$$\text{Old Growth IR (trees/yr/ft of stream)} \times \frac{\text{\# trees/acre >= 24" in 2nd growth}}{\text{\# trees/acre >= 24" in old growth}}$$

If there were the same number of 24-inch trees in second growth as in old growth, then the input rate for second

growth and old growth would be equal. However, if the input rate is less in second growth than old growth, as is normally the case for at least the first 100 years, then the input rate is proportionally less for 2nd growth as compared to old growth. The productivity of the land abutting the stream is a key to the period of time it would take for second growth to result in the same number of trees as old growth.

Tree growth which eventually supplies woody debris to the stream is dependent on the forest's inherent productivity. Since the number of trees that may enter the stream must be compared to the old growth situation, it is necessary to be able to predict the numbers of trees available, greater than or equal to the key piece size after a given period of time. Intuitively, each channel type should exhibit a different inherent level of productivity.

Initially, an analysis was made with the data in the Tongass National Forest's Geographical Informational System (GIS) to try to calculate an average site productivity next to a stream, by channel type, based on volume classes. It was thought that the site productivity could be used to estimate growth of trees. An analysis using GIS was completed, but appeared to make very little intuitive sense, and was not consistent with vegetative productivity measures taken at stream channels.

The reason probably resulted from the size of the vegetative plots, in relationship to the size of the riparian buffer. With vegetative plots that are at least 5 acres in size, and more often 10-20 acres, the stream buffer only incorporates a small portion of each of the polygons. The productivity call for the polygons was based on the average in the entire polygon, therefore if there was a higher productivity next to the stream (which is usually the case), this increased productivity was averaged across the entire polygon. This tended to decrease the productivity measured next to the stream. Therefore, it appeared inappropriate to use the timber type GIS information (volume class) as a measure of productivity for the regrowth of timber.

Edgington et al.,[6] with the Alaska Department of Fish and Game, has collected data on riparian plant associations and productivity associated with stream channels during channel type field inventories. He had included in his sampling data many of the different channel types. This data was divided into high, medium, and low productivity classes. Typically the low gradient drainages included higher productivity classes, while the higher gradient incised streams included lower productivity class. Intuitively this was expected.

The rate of regrowth of trees greater than or equal to 24 or 36 inches in size is estimated by interpretation of the

tables in Taylor.[7] Taylor shows the number of trees per acre by age class in a number of different site indices. To use Taylor, a site index of 70 for low site, site index of 110 for medium site and site index of 130 for a high site was recommended. During the implementation of the models on the computer, it became apparent that forecasts for second growth to 210 years following harvest were necessary. Estimates for these later years were made.

The final data needed to calculate the rate of input to the stream system, as compared to the old growth system, is the number of large woody debris pieces per linear foot of stream per year entering the stream. The mechanics of how trees enter a stream is important. Murphy et al.[8] identify the sources of woody debris to streams. They indicate that the majority (78 percent) of large woody debris enters through erosional processes (e.g. streambank undercutting and landslides) and windthrow. They show that relatively small amounts come from natural mortality of falling trees (21 percent). With this knowledge, it is assumed that mortality is not a major factor and, therefore, modeling of mortality (falling dead trees) is not necessary. Since most of the trees come from random windthrow and stream erosion, these forms of woody debris entry into a stream should be relatively constant in both old-growth and second growth given an equal number of source trees.

Since the volume entering a stream in a natural, old growth, system is equal to the volume resulting from the rate of decay (K), this rate of decay times the number of stems of large woody debris per linear foot in old growth is equal to the large woody debris rate of input in old growth per foot per year.

This was expressed in the equation, as shown above:

Input Rate (IR) 2nd Growth (trees/yr/ft) =

$$\textbf{Old Growth IR (trees/yr/ft of stream)} \times \frac{\text{\# trees/acre >= 24" in 2nd growth}}{\text{\# trees/acre >= 24" in old growth}}$$

Old growth input rate in trees/yr/ft of stream is calculated as:

k (decay rate) x #/linear foot of LWD > = 24 inches

If the decay rate were .02 and the number of LWD pieces greater than or equal to 24 inches and 10 ft in length were .02 per linear foot, then the LWD input rate in old growth would be .0004/ft/year.

Rearing dependence on woody debris formed pools

To this point it has been assumed that pools are formed entirely by woody debris, and it is this habitat variable

that supplies over wintering (smolt) rearing capability. However, all stream channels are not alike. Some streams are much more dependent than others on large woody debris to form instream pools. Where pools are not formed by large woody debris, often large boulders and undercut banks form pools. Typically, pools in high gradient streams are formed by large rock and boulders, while low gradient channel pools are formed by woody debris and undercut banks.

This model assumes that only those pools formed by woody debris are affected by the sources of woody debris. Pools formed by other means will rear a constant number of fish, independent of large woody debris, and will be held as a constant through this model. These percentages were calculated by Russell.[9] Russell's data did not document large woody debris formed pools for all channel types. For the other channels, estimates were either made with best unpublished data developed by John Edgington, Alaska Dept. of Fish and Game, during the 1988 field season, or by those with expert knowledge of the the channel types and comparison to percentages for similar channel types. Heifetz et al.[10] confirm that pools result from a number of sources (such as large organic debris, undercut banks, and cobble substrates) and are present at different percentages based on the presence or absence of clearcut harvest.

Woody Debris Input Changes by Prescription

Different management area prescriptions have been proposed for managing the Tongass National Forest in the Tongass Land and Resource Management Plan Revision. They were specifically developed to insure that the Forest could adequately address the issues and concerns raised by the public. These prescriptions represent a wide range of alternative methods for managing the Forest.

The "Fish Habitat and Water Quality" and "Stream and Lake Protection" Management prescriptions relate to riparian management. Both are designed to conform to the requirements of the National Forest Management Act (NFMA), with "Fish Habitat and Water Quality" meeting the NFMA regulations of no management practices which seriously and adversely affect water conditions or fish habitat and "Stream and Lake Protection" which, in addition, maintains or enhances the biological productivity of aquatic systems and riparian dependent species.

As used in these models, the riparian prescriptions are those that were developed for the Revision DEIS (1990), and are <u>not</u> the riparian prescriptions found in this Supplement to the Revision DEIS. Both riparian prescriptions were modified to be in compliance with the requirements of the Tongass Timber Reform Act of 1990 (TTRA). TTRA requires 100 foot no commercial harvest buffers within 100 feet of Class

I streams and within 100 of Class II streams which flow directly into Class I streams.

A riparian prescription would apply wherever development activities could be more impacting than in the riparian prescription. For instance, A riparian prescription would apply along all perennial streams and riparian areas which could normally be allocated to a timber production prescription. However, where management is normally less impacting than that which could occur in a riparian prescription, e.g., in old growth management, then a riparian prescription would not apply. In the latter case, forest-wide direction and standards/guidelines would apply in managing the riparian area.

In addition to these two prescriptions, two other riparian schemes need analysis. A number of prescriptions include essentially no resource development, such as the old growth, beach fringe, wild river, and primitive recreation prescriptions. Since no, or negligible disturbance should occur to reduce inputs of instream large woody debris, these prescriptions result in no change to smolt habitat capability of a stream. The other scheme is clearcut to the streambank for every channel type. This is not an implementable prescription as it is not considered to meet the requirements of the National Forest Management Act or the Tongass Timber Reform Act, but is considered for benchmark analysis. In benchmark analysis, the effect on timber harvest and other resources (such as fish) with maximum timber production is measured. Benchmarks are also used to measure the effects of maximizing outputs of other resources, besides timber.

Other riparian prescriptions could easily be designed, and would be evaluated for change in woody debris source potential much the same as will be shown for the three prescriptions with riparian harvest described above.

Clearcut is the simplest of the management prescriptions to model. In this prescription, it is assumed that all the woody debris sources (key pieces of greater than or equal to 24-inch or 36-inch diameter, depending on channel type) are harvested. Large woody debris in the stream is allowed to remain and decay naturally.

The "Fish Habitat and Water Quality" Management Prescription, which would result in some reductions in fish populations (prior to the passage of the Tongass Timber Reform Act), typically allows harvest within a variable distance of the stream. For instance, for some channel types, no harvest is allowed 0-60 ft from the stream, and then single tree selection is allowed in the balance of the riparian area (typically 60-100 ft).

Murphy et al.[11] show the distance from which woody debris enters stream systems. Using this information, and the prescription data, estimates were made of the woody debris depletion for each of the prescriptions, and for each of the stream classes, if applicable. Single tree selection was defined as one entry, harvesting 10 percent of the tree size classes found in the riparian harvest area.

Channel Type Capability Calculations

For each species (Dolly Varden and coho salmon) and for each stream class (only in the case of Dolly Varden which can be either resident or anadromous fish), a separate model (spreadsheet) was developed. The model was run for each of the channel types, by decade, for 210 years following harvest. The 210 year period incorporates the maximum predicted reduction in habitat capability following harvest.

Forest Wide Capability Calculations

The models predict a number of habitat capability statistics, including habitat capability for: 1) 1954, prior to any large scale industrial logging on the Tongass National Forest, with the Forest almost entirely old growth; 2) 1979, at the beginning of the implementation of the current Tongass Land Management Plan; and 3) 1988, which is considered the current situation. Other scenarios the models can predict include how the habitat capability would change if there were no additional harvest adjacent to streams. The following is a description of the models that have been run, including the rationale for the model and some of the relevant assumptions.

Model BASE88: Coho and Dolly Varden capability under current management.

Rationale: To determine what the effects of past management activities have been, and what anticipated changes resulting from those changes into the future would be. These models would also show the effects of implementing a 100-foot buffer along all significant salmon streams.

Assumptions: No additional timber harvest affecting the riparian area; no additional fishway construction to make additional stream length accessible. This model includes adjustments for fish passages built between 1954 and 1988.

Model BASE54: Coho and Dolly Varden capability under current management, and as if no fishways were built between 1954 and the present.

Rationale: To determine what the effects of past management activities have been, and what anticipated changes resulting from those changes into the future would be. These models would also show the effects of implementing a 100-foot buffer along all significant salmon streams. This model shows the reductions that have occurred due to timber harvest, with no increases shown for fishway construction. Subtracting the results of this model (BASE54) from model BASE88 shows the estimated capability resulting from fishway construction.

Assumptions: No additional timber harvest affecting the riparian area; no additional fishway construction to make additional stream length accessible. This model does not include adjustments for fish passage built between 1954 and 1988.

Model 54XCC: Coho and Dolly Varden capability under the scenario that all suitable riparian trees would have been harvested in 1954.

Rationale: To determine the maximum effect of timber harvest (clearcut) on stream habitat capability.

Assumptions: All riparian timber affecting the riparian area clearcut harvested in 1954. This model includes no adjustment for fish passages built between 1954 and 1988.

Model 88XCC: Coho and Dolly Varden capability under the scenario that all suitable riparian trees would have been harvested in 1988.

Rationale: To determine the maximum effect of timber harvest (clearcut) on current stream habitat capability.

Assumptions: All riparian timber affecting the riparian area clearcut harvested in 1988. This model includes habitat enhancements and reductions that have occurred between 1954 and 1988.

Model 54X13: Coho and Dolly Varden capability under the scenario that all suitable riparian areas would have been harvested using the "Fish Habitat and Water Quality" Management Prescription in 1954.

Rationale: To determine the maximum effect of implementation of the "Fish Habitat and Water Quality" Management Prescription on stream habitat capability.

Assumptions: All riparian areas harvested using the Standards and Guidelines of the "Fish Habitat and Water Quality" Management Prescription in 1954. This model includes no adjustment for fish passages built between 1954 and 1988.

Model 88X13: Coho and Dolly Varden capability under the scenario that all suitable riparian trees would have been harvested using the "Fish Habitat and Water Quality" Management Prescription in 1988.

Rationale: To determine the maximum effect of implementation of the "Fish Habitat and Water Quality" Management Prescription on current stream habitat capability.

Assumptions: All riparian areas harvested using the Standards and Guidelines of the "Fish Habitat and Water Quality" Management Prescription in 1988. This model includes habitat enhancements and reductions that have occurred between 1954 and 1988.

Model 54X14: Coho and Dolly Varden capability under the scenario that all suitable riparian areas would have been harvested using the "Stream and Lake Protection" Management Prescription in 1954.

Rationale: To determine the maximum effect of implementation of Management Prescription 14-G on stream habitat capability.

Assumptions: All riparian areas harvested using the Standards and Guidelines of the "Stream and Lake Protection" Management Prescription in 1954. This model includes no adjustment for fish passages built between 1954 and 1988.

Model 88X14: Coho and Dolly Varden capability under the scenario that all suitable riparian trees would have been harvested using the "Stream and Lake Protection" Management Prescription in 1988.

Rationale: To determine the maximum effect of implementation of the "Stream and Lake Protection" Management Prescription on current stream habitat capability.

Assumptions: All riparian areas harvested using the Standards and Guidelines of the "Stream and Lake Protection" Management Prescription in 1988. This model includes habitat enhancements and reductions that have occurred between 1954 and 1988.

Model values for streams are calculated based on four items: 1) length of each channel type, 2) capability by channel type, 3) amount of each channel type available (i.e. without downstream barriers to anadromous fish), and 4) vegetation condition of the riparian area. The source of each of the data items is as follows:

Channel type lengths:
Tongass-wide channel typing inventory. For wilderness areas without channel typing inventories, proration estimates from areas with channel typing data are made. See below. Tables used for channel type lengths included channel-type and stream class.

Capability by channel type:
The models described on the preceding pages of this paper.

Amount of channel type available:
Biologists on each of the Tongass Administrative Areas made estimates of amount of stream class I habitat available to coho salmon in 1954, 1979 and 1988.

Vegetative condition:
Estimates were made of riparian vegetative condition using the Geographical Information System (GIS) used by the Forest Revision Planning Team (as used in 1989-1990). To do this, 100-foot buffers (150-foot buffers for some of the larger floodplain channels) were computer generated along every stream in the channel type database. The area encompassed by these buffers was overlain with the timber type maps stored in the GIS. A report was produced showing, by VCU, the acres of the buffers in each timber size class. The following interpretations of size class in the timber type data were used:

Logged = average 5 year old stands
Size Class 1 = average 15 year old stands
Size Class 2 = average 45 year old stands
Size Class 3 & 4 = considered to be old growth

In some cases, riparian areas that have never been harvested were inventoried as size class logged, 1 or 2; this occurs in areas with early successional vegetation, such as in Yakutat and on mainland glaciated areas. These locations were reinterpreted to be old-growth in the capability determinations.

Effects of past management activities were modeled by assuming: 1) all riparian timber harvest prior to 1979 generally employed a clearcut prescription, and 2) all riparian harvest between 1979 and 1988 averaged a Prescription Fish Habitat and Water Quality harvest. Therefore, any riparian buffer currently in Size Class 1 and

2 used the clearcut habitat capability tables, and those in the "Logged" size class used the Prescription Fish Habitat and Water Quality habitat capability tables.

Geographical Reporting Areas

The basic geographic area for which habitat capability has been calculated is the VCU (Value Comparison Unit), although capability could be calculated for individual streams, if desired. Value comparison units have been aggregated into larger areas, called geozones. Geozones have been aggregated to Administrative Areas of the Tongass (Ketchikan, Stikine and Chatham Areas), and Administrative Areas have been aggregated to a value for the entire Forest. (Note: Geozones were used in Revision DEIS (1990), but have not been carried through to this Supplement. Management Areas are typically used to describe geographical location in the Supplement. With the changes in riparian management required with the passage of Tongass Timber Reform Act (no future change in habitat capability predicted with no commercial timber harvest along most fish streams), there was no reason to recalculate habitat capability using the new geographic unit.)

```
VCU  (sum of individual channel types and streams)
  \
   \
    Geozone  (sum of VCUs)
           \
            \
             District   (sum of Districts)
                    \
                     \
                      Admin. Area  (sum of Districts)
                                 \
                                  \
                                   Tongass National Forest
```

Tables with VCU, geozone and Administrative Area Reports are too detailed to place in this here, however they are available in the planning records.

Lakes

Rearing habitat capability resulting from lakes for both Dolly Varden and coho is held as a constant in this model. The rationale for this is that lake production is normally not altered by upland management activities. In Southeast Alaska, only two lake systems are thought to have been altered by timber management activities; both are located on private lands.

The following assumptions were used about lake production of Dolly Varden and coho. The assumptions were based on communications with various agency biologists, including from the National Marine Fisheries Service, the Forest Service, AK Dept. of Fish and Game, and Northern Southern Regional Aquaculture Association.

Coho Production 30% of acreage under 500 ft elevation available
75 smolts/acre
no lakes available at over 500 ft elevation
Dolly Varden Prod. 60% of acreage under 500 ft elevation available
160 fish/acre
20% of acreage 500-200 ft elevation available
80 fish/acre

Minor modifications of these assumptions result in substantial differences in the overall capability of the Forest to produce coho and Dolly Varden. However these productions values are constant across all viable management alternatives, and the accuracy of these estimates are not critical to the future management of the Forest.

Pink Salmon Model

Pink salmon are typical of the five species of Pacific salmon in that their life cycle spans both a freshwater and saltwater phase. In developing a model that predicts numbers of pink salmon, a look should be taken at all phases of a salmon's life history, including those periods that are the most limiting.

It is well known that pink salmon adult returns vary greatly from year to year, although in most cases this does not appear to be correlated to on-land activities. Some of the factors that may affect survival are: metereological effects on land (such as very cold winters in which the stream gravels freeze to the depth of the eggs); meteorological effects in the ocean (such as particularly warm or cold ocean temperatures or wayward currents affecting food availability); and, off-shore fish harvests, including predation.

The Forest Service, as a land management agency, is primarily interested in the capability of the land and its associated waters to predict numbers of fish. Because of the highly variable nature of adult pink salmon production, to best represent production of the streams and of the land it is best to look at smolt habitat capability, e.g., the potential of the streams to produce smolts assuming full escapement, or stocking of adult fish.

In the phase of the pink salmon life history where the fish are dependent on the land, pink salmon are thought to be most often limited by the quality and quantity of spawning gravels present in a system. This differs from many of the other species of salmon (such as chinook, coho and sockeye) which require periods of freshwater rearing. With these other species it is generally found that the the freshwater

rearing phase of their life is more limiting than the quantity of spawning habitat available. Because pink salmon are most often limited by spawning availability (as would be chum salmon, also a non-freshwater rearing salmon species), it is this phase of their life for which this model is developed.

Assumptions: **1 female/sq.meter (or 2 fish per sq. meter) is preferred spawning density on ASA***

*available spawning area

The Capability Model

The pink salmon production from a stream is correlated to the area of available spawning gravels, and is limited to that portion effectively used by pink salmon and not other species of spawning fish. Total spawning area is a function of accessible stream length, available spawning area (ASA) within each stream reach, portion of the ASA within a stream reach that is normally accessible by pink salmon, and portion of the ASA that is used by pink salmon (rather than another species of salmon).

Stream reaches are defined for the Tongass National Forest by channel types: an inventory and classification of similar stream reaches. For each channel type, the average width of the stream is known, as is the average amount of ASA within that stream reach.

Each unit area of available spawning area has a smolt capability. This smolt capability is expected to vary somewhat by: year, channel type, gravel quality, location within the watershed, watershed disturbance, meterological effects including effects represented as anchor ice and stream gravel freezing, stream temperature and probably other variables. We have assumed for this model that channel type is the predominant factor controlling the smolt capability per unit area of spawning gravel.

Knowing by channel type, ASA per foot of stream length, the portion of the ASA availalbe in a channel type to pink salmon, the portion used by pink salmon rather than other spawning salmon species, the smolt capability per unit of stream area and whether a given channel reach will be accessible to pink salmon due to downstream barriers (including barriers represented by channel types) a model for stream habitat capability can be identified:

Sum by Each Stream Reach (channel type) Length X ASA/ft
X Portion ASA available
X Portion ASA used only by pink salmon
X Number of smolts/ASA

It is assumed in this model that distance from salt water is NOT a factor for spawning pink salmon. Pink salmon usually will migrate at least 40 miles upstream and have been known to migrate at 435 miles upstream ("Freshwater Habitat Model for Pink Salmon - Oncorhynchus gorbusch," Alaska Department of Fish and Game, Habitat Protection Section, Resource Assessment Branch, April, 1981). All (or essentially all) of the streams on the Tongass National Forest are considerably shorter than 40 miles in length. Therefore, although pink salmon may be adapted to southeast Alaska's coastal streams, it still seems reasonable to assume that all accessible habitat on streams is capable of producing pink salmon.

Assume that a barrier that is listed as a partial barrier is a total barrier to pink salmon. Since pink salmon are the least capable of all the salmon to pass over barriers, very few of the pink salmon, even in a high escapement year, would be expected to pass the partial barrier. Although there may be the occasional water condition, and adult that is strong enough to pass, the numbers of these fish is probably inconsequential.

Table 1 shows the breakdown of use by pink salmon for different stream channel types.

Table 1. Stream channel types used by pink salmon.

Channel Type	ASA(m^2) ft	Will Pink Salmon Pass Through?	What % of ASA is Used?	Comments
all A's		no	0	
B-1		yes	100	
B-2		no	0	B-2 draining directly into salt water
B-2		no	50	B-2 tributary to C channels; only half the ASA is used to account for portions of channels over 3% gradient
B-3		yes	100	
B-4		no	0	
B-5		no	20	lower end of B-5 is generally available
B-6		no	0	
B-7		no	0	
all C's		yes	100	
D-1		no	0	
D-2		no	0	
D-3		no	0	
D-4		yes	0	
D-5		yes	0	
D-6		no	0	have some ASA in very unusual circumstances
D-7		no	0	
all E's		yes	100	
L-1		yes	0	
L-2		yes	0	
L-3		no	0	
L-4		yes	0	
L-5		yes	0	

The Department of Fish and Game has had a program of doing egg/fry pumping since at least 1977. The purpose of the egg pumping was to help enable the Department to make estimates of over-winter survival, and hence returns to the fishery from the measured brood stock. In southern southeast Alaska this program was discontinued because with the high variability the Department was unable to accurately predict fish returns. In northern southeast Alaska, the egg/fry pumping is still being continued.

Use of the egg/fry pumping data can help determine the egg to smolt survival in southeast Alaska's streams. Assuming that optimum escapement for pink salmon is 1 female per square meter of spawning gravel (ASA), and that the data

represents optimum spawning, by breaking down the egg/fry pumping data by channel type a different survival percentage can be looked at for the different channel types. Only northern Southeast data should be used for this analysis, as the Department acknowledges the inconsistencies with the southern southeast Alaska's data. In any case, the egg/fry pumping data should help fine-tune this model.

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Economic Efficiency Analysis

Net Public Benefits

Net public benefits are the "over-all long-term value of all outputs and positive effects (benefits) less all associated Forest inputs and negative effects (costs) whether they can be qualified or not" (36 CFR 219.3). Net public benefits represents the sum of the net value of priced outputs plus the net value of non-priced outputs.

Economics attempts to estimate the benefits and costs associated with all management options for the Forest. In reality, it is very difficult to obtain adequate data for estimating costs involved in the production of forest outputs or the benefits of many forest resources. This is especially true when making estimates 50 to 160 years from the present. As a result, different procedures are used to estimate benefits and costs which cannot be adequately addressed in the benefit and cost calculations. This does not mean that these are not important in the Forest planning process, but that economics is unable to develop methods of recognizing them in estimates of efficiency. These are considered non-priced benefits and costs. While they are not considered in measures of economic efficiency, they are considered in the evaluation of net public benefits.

Present Net Value

The primary criterion for measuring the value of a Forest is present net value (PNV) (FSM 1971.3). PNV represents the dollar difference between the discounted value of all outputs to which monetary values are assigned and the discounted costs of managing the Forest over the planning horizon (e.g., 160 years).

The PNV calculated in FORPLAN was added to the discounted benefits and costs not modeled in FORPLAN. The total PNV was then used as one basis of comparison between alternatives and benchmarks.

Parameters

Base Year. Most dollar values are expressed in 1985 dollars. The following factors based on the implicit price deflator for the gross national product were used to adjust values from other years to 1985.

Year	Factor
1978-85	1.54
1979-85	1.41
1980-85	1.30
1981-85	1.18
1982-85	1.11

1983-85	1.07
1984-85	1.03
1985-85	1.00
1986-85	.97
1987-85	.95
1988-85	.92
1989-85	.88
1990-85	.85

Discount Rate. A discount rate of 4.0 percent was used to determine the present net value of future benefits and costs. This rate approximates the long-term cost of capital in the private sector measured by the return on AAA corporate bonds after adjustment for inflation.

Trends. No real price or cost trends for any resource were used in the FORPLAN runs. Costs and prices for all resources were held constant.

Costs

All costs used in the analysis are estimates based on accounting records and the experience of project managers. Costs for applying the different resource prescriptions were estimated and built into the economics tables in FORPLAN.

Costs were checked for reasonableness by comparing the first decade costs for the current alternative against actual expenditures for FY 1989. Costs for the current alternative deviated by less than 5 percent from actual expenditures.

The costs used in FORPLAN represent the long-term variable costs rather than the short-term variable costs of producing outputs. The only true <u>fixed costs</u> are minimum level (background) costs. Minimum level costs are all of the costs associated with the minimum level benchmark. All costs above minimum level are treated as <u>variable costs</u>.

Not all costs, however, were included in the FORPLAN model. The minimum level (background) costs plus other resource costs were not included in the FORPLAN model. Although these costs were not in the model they were manually discounted and included in the PNV calculation. These costs amounted to $17.9 million per year. These costs are associated solely with maintaining the Forest and are not related to any outputs other than background or incidental outputs. Those costs that were included in the FORPLAN model were those associated with the timber resource.

Costs used in the FORPLAN Analysis

Calculation of LTF, Haul, and Roading Coefficients. These costs were calculated for each of the 141 Management Areas (MAs as specified in TTRA). Using the Log Transfer Facility map and data base, each LTF, existing or proposed, was

assigned to the appropriate MA. The cost of LTF construction or reconstruction and timber hauling was determined from existing information and engineering estimates. The hauling cost represents the cost to get one MBF of timber from the landing to the mill. Road density per 1000 acres are the number of road miles needed to access 1000 acres of suitable timber land. The original information used to calculate final coefficients is shown in Table B-4.

Table B-4.
Log Transfer Facilities and Haul and Road Values by Management Area

TTRA MAs	LTF Location	Total LTF Cost	Hauling Cost ($/MBF)	Roads Per 1000 Acre
C02A	Berner's Bay	80000.00	38.00	6.0
C03	Mab Island	80000.00	38.00	6.0
C10	Mallard Cove	80000.00	33.00	12.0
C10	Speel Arm	80000.00	33.00	12.0
C10	Gilbert Bay	80000.00	33.00	12.0
C10	Slocum Inlet	80000.00	33.00	12.0
C10	Sawmill Cove	0.00	33.00	12.0
C10	Limestone Inlet	80000.00	33.00	12.0
C13	Sand Bay	80000.00	34.00	7.0
C13	N. Windham	80000.00	34.00	7.0
C13	S. Windham	80000.00	34.00	7.0
C13	Hobart Bay	80000.00	34.00	7.0
C14	Mid PT Houghton	80000.00	34.00	7.0
C14	Little Lagoon	80000.00	34.00	7.0
C14	North Arm	80000.00	34.00	7.0
C19	Couverden	0.00	53.00	7.5
C21	Barlow Cove	80000.00	32.00	6.0
C22	Young Bay	0.00	32.00	6.0
C23	Pleasant Island	80000.00	30.00	8.5
C24	Port Althorp	80000.00	34.00	10.0
C24	Vein Mountain 8584	80000.00	34.00	10.0
C25	Mite Cove 8585	80000.00	34.00	10.0
C25	Yakobi 8586	80000.00	34.00	10.0
C27	Added	0.00	38.00	6.5
C28	West Port Frederick	0.00	38.00	6.5
C29	Eight Fathom Bight	0.00	38.00	6.5
C29	Salt Lake Bay	0.00	38.00	6.5
C29	Goose Flats	1000000.00	36.00	7.0
C30	Long Island	0.00	38.00	6.5
C30	Seal Creek	80000.00	38.00	6.5
C30	Kennel Creek	0.00	38.00	6.5
C31	Whitestone Harb.	1200000.00	38.00	6.5
C31	False Bay	80000.00	38.00	6.5
C32	Indian River	0.00	38.00	6.5
C34	Inbetween	0.00	36.00	7.0
C34	Crab Bay	0.00	36.00	7.0

Table B-4. (continued)
Log Transfer Facilities and Haul and Road Values by Management Area

TTRA MAs	LTF Location	Total LTF Cost	Hauling Cost ($/MBF)	Roads Per 1000 Acre
C37	False Island	80000.00	36.00	7.0
C37	Sitkoh Bay	80000.00	36.00	7.0
C37	Corner Bay	500000.00	36.00	7.0
C37	Finger Creek	80000.00	36.00	7.0
C37	Todd	0.00	36.00	7.0
C39	Ushk Bay	80000.00	29.00	8.0
C39	Deep Bay	80000.00	29.00	8.0
C40	S. Sukoi Inlet	80000.00	28.00	12.0
C40	ST. John Baptist	80000.00	28.00	12.0
C40	Fish Bay	80000.00	28.00	12.0
C40	Halleck Island	80000.00	28.00	12.0
C40	Partofshikof Is.	80000.00	28.00	12.0
C40	North Sukoi Inlet	80000.00	28.00	12.0
C40	Poison Cove	80000.00	29.00	8.0
C40	Nakwasina	80000.00	28.00	12.0
C41	Appleton Cove	80000.00	30.00	8.0
C41	Saook Bay	80000.00	30.00	8.0
C41	Rodman Bay	1100000.00	30.00	8.0
C43	West Basin	80000.00	30.00	8.0
C43	Mid Arm Kelp Bay	80000.00	30.00	8.0
C43	Hanus Bay	80000.00	30.00	8.0
C43	Cosmos Cove	80000.00	30.00	8.0
C43	Pond Island	80000.00	30.00	8.0
C43	South Arm Kelp Bay	80000.00	30.00	8.0
C43	South Basin	80000.00	30.00	8.0
C44	Krestof Island	80000.00	28.00	12.0
C44	Sinitisin Cove	80000.00	28.00	12.0
C44	Kalinin Bay	80000.00	28.00	12.0
C44	Mud Bay	80000.00	28.00	12.0
C45	Added	80000.00	28.00	12.0
C46	Added	0.00	28.00	12.0
C48	Camp Coogan	80000.00	28.00	12.0
C48	Deep Inlet	80000.00	28.00	12.0
C48	Silver Bay	80000.00	28.00	12.0
C48	Kidney Cove	80000.00	28.00	12.0
C55	Sawmill Cove	0.00	67.00	5.0
K01	Labouchere Bay	0.00	39.00	6.0
K03	Thorne Island	65000.00	39.00	6.0
K03	El Capitan	70000.00	36.00	7.5
K03	Calder	70000.00	36.00	7.5
K03	Whale Pass	0.00	39.00	6.0
K03	Sutter Creek	40000.00	36.00	7.5
K04	White Cliff Island	70000.00	36.00	7.5
K04	Eagle Island	70000.00	36.00	7.5
K04	Owl Island	70000.00	36.00	7.5
K04	Hoot Island	70000.00	36.00	7.5
K04	Tokeen	70000.00	36.00	7.5

Table B-4. (continued)
Log Transfer Facilities and Haul and Road Values by Management Area

TTRA MAs	LTF Location	Total LTF Cost	Hauling Cost ($/MBF)	Roads Per 1000 Acre
K04	Marble West	70000.00	36.00	7.5
K04	Orr Island S.	70000.00	36.00	7.5
K04	Anasket	70000.00	36.00	7.5
K04	Scott Island	70000.00	36.00	7.5
K04	Marble East	70000.00	36.00	7.5
K05	Cape Pole	150000.00	36.00	7.5
K07	Tuxekan Peep Rk	70000.00	36.00	7.5
K07	El Capitan Island	70000.00	36.00	7.5
K07	Naukati	0.00	39.00	6.0
K07	Port Alice	70000.00	36.00	7.5
K08	Stevenson Island	65000.00	39.00	6.0
K09	Coffman Cove	0.00	39.00	6.0
K10	Grindal	65000.00	39.00	6.0
K10	Windfall Harbor	65000.00	39.00	66.0
K10	Thorne Bay	0.00	39.00	6.0
K11	Camp Island	70000.00	36.00	7.5
K11	Baloney Island	70000.00	36.00	7.5
K11	No Name Island	70000.00	36.00	7.5
K13	San Fernando	70000.00	21.00	10.0
K14	Nichen Cove	40000.00	39.00	7.5
K14	Bautista	70000.00	21.00	10.0
K15	Added	0.00	39.00	7.5
K17	Twelve Mile	65000.00	27.00	6.0
K18	E. LT. Coal Bay	65000.00	27.00	6.0
K18	E. McKenzie Inlet	65000.00	27.00	6.0
K18	W. McKenzie Inlet	65000.00	27.00	6.0
K18	S. McKenzie Inlet	65000.00	27.00	6.0
K18	West Chomoly	65000.00	23.00	8.5
K18	Polk Inlet	0.00	27.00	6.0
K19	Spiral Cove	65000.00	23.00	8.5
K19	Doctor Point	65000.00	23.00	8.5
K19	Sunny Cove	65000.00	23.00	8.5
K19	East Chomly	65000.00	23.00	8.5
K19	Lancaster Cove	70000.00	23.00	8.5
K20	Added	80000.00	27.00	9.5
K21	North Keete	65000.00	27.00	6.0
K21	South Keete	65000.00	27.00	6.0
K21	Hassiah Inlet	65000.00	27.00	6.0
K21	North Kassa Inlet	65000.00	27.00	6.0
K21	South Kassa Inlet	65000.00	27.00	6.0
K21	North Sukwan	65000.00	27.00	6.0
K21	South Sukwan	65000.00	27.00	6.0
K21	Kasook Inlet	65000.00	27.00	6.0
K21	Eek Inlet	65000.00	27.00	6.0
K21	Long Island	65000.00	27.00	6.0
K21	Shelikof Island	65000.00	27.00	6.0
K21	Goat Island	65000.00	27.00	6.0

Table B-4. (continued)
Log Transfer Facilities and Haul and Road Values by Management Area

TTRA MAs	LTF Location	Total LTF Cost	Hauling Cost ($/MBF)	Roads Per 1000 Acre
K21	Nutkwa	65000.00	27.00	6.0
K22	Port Refugio	250000.00	27.00	9.5
K22	Mears	80000.00	27.00	9.5
K22	Diver Bay	80000.00	27.00	9.5
K22	Breezy Bay	80000.00	27.00	9.5
K22	Hook Arm	80000.00	27.00	9.5
K22	Coco Harbor	80000.00	27.00	9.5
K22	Waterfall Bay	80000.00	27.00	9.5
K22	Port Bazan	80000.00	27.00	9.5
K22	Datzkoo Bay	80000.00	27.00	9.5
K22	Rose Inlet	80000.00	27.00	9.5
K22	View Cove	50000.00	27.00	9.5
K24	Chomly	65000.00	23.00	8.5
K25	Cannery Cove	65000.00	23.00	8.5
K25	West Arm Moira	65000.00	23.00	8.5
K25	Johnson Cove	65000.00	23.00	8.5
K25	South Arm Moira	65000.00	23.00	8.5
K25	Nowiskay Cove	65000.00	23.00	8.5
K26	North Dickman	65000.00	23.00	8.5
K26	Kegan Cove	65000.00	23.00	8.5
K26	East Dickman	70000.00	23.00	8.5
K28	West Ingraham	65000.00	23.00	8.5
K28	West Arm Kendrick	65000.00	23.00	8.5
K28	Kendrick	65000.00	23.00	8.5
K28	McLean Arm	65000.00	23.00	8.5
K28	East Ingraham	65000.00	23.00	8.5
K29	Magnetic Point	70000.00	35.00	10.0
K29	Emerald Bay	70000.00	35.00	10.0
K30	Snail Point	70000.00	35.00	10.0
K30	South Pt. Stewart	200000.00	35.00	10.0
K30	North Spacious Bay	70000.00	35.00	10.0
K31	Cow Creek	65000.00	29.00	12.5
K31	Bell Island	260000.00	22.00	7.5
K32	Neets Bay	0.00	29.00	12.5
K32	Traitors	60000.00	29.00	12.5
K32	Marguerite Bay	60000.00	29.00	12.5
K32	Neets Chin	60000.00	29.00	12.5
K32	Neets Clam	60000.00	29.00	12.5
K32	Neets Easy	60000.00	29.00	12.5
K32	Carrol River	240000.00	29.00	12.5
K32	West Traiters	65000.00	29.00	12.5
K32	NE Traiters	65000.00	29.00	12.5
K32	Fire Cove	0.00	29.00	12.5
K34	Added	0.00	29.00	12.5
K35	Klu Bay	60000.00	29.00	12.5
K35	Shrimp Bay	60000.00	29.00	12.5
K35	East Thorne Arm	240000.00	29.00	12.5

Table B-4. (continued)
Log Transfer Facilities and Haul and Road Values by Management Area

TTRA MAs	LTF Location	Total LTF Cost	Hauling Cost ($/MBF)	Roads Per 1000 Acre
K35	Shelter Cove	240000.00	29.00	12.5
K35	Licking Creek	65000.00	29.00	12.5
K35	Shoal Cove	0.00	29.00	12.5
K39	White River	0.00	29.00	12.5
K39	Ward Cove	0.00	29.00	12.5
K40	Betton Island	65000.00	29.00	12.5
K40	Stack Island	65000.00	29.00	12.5
K41	Gravine Island	65000.00	29.00	12.5
K42	Duke Island	80000.00	37.00	15.5
K44	Steward B.C.	0.00	44.00	7.5
K45	Portland Canal	80000.00	44.00	7.5
S01	Cape Fanshaw	40000.00	33.00	7.5
S04	Rowan Bay	0.00	37.00	7.0
S07	Marble Islet	40000.00	31.00	7.5
S07	Kell Bay	40000.00	31.00	7.5
S07	W. Affleck Canal	40000.00	31.00	7.5
S07	Port McArthur	40000.00	31.00	7.5
S08	Added	80000.00	31.00	7.5
S09	Port Camden	60000.00	37.00	7.0
S09	No Name	300000.00	37.00	7.0
S10	Portage	0.00	39.00	8.5
S11	Little Hamilton	0.00	39.00	8.5
S16	Blind Slough	0.00	32.00	7.5
S16	Tonka	0.00	39.00	8.5
S16	Papke's Landing	0.00	32.00	7.5
S17	Woodpecker Cove	0.00	32.00	7.5
S18	Sokolof	40000.00	23.00	5.0
S18	Vank	40000.00	23.00	5.0
S18	Rynda	0.00	23.00	5.0
S19	St. John's	0.00	32.00	4.0
S19	Deep Bay	0.00	32.00	4.0
S20	Douglas Bay	250000.00	52.00	10.0
S21	Shrubby	0.00	23.00	5.0
S21	West	40000.00	23.00	5.0
S21	Blashke	40000.00	23.00	5.0
S21	Bushy	0.00	23.00	5.0
S22	Woronkofski	40000.00	23.00	5.0
S23	Olive Cove	40000.00	26.00	7.0
S23	King George	80000.00	26.00	7.0
S23	Mossman	80000.00	26.00	7.0
S23	Menefee	80000.00	26.00	7.0
S23	Burnett	80000.00	26.00	7.0
S23	Anita Bay	0.00	26.00	7.0
S25	Venus Cove	0.00	32.00	8.5
S25	Tom	80000.00	26.00	8.0
S25	Marten	80000.00	26.00	8.0
S25	Pat's Creek	0.00	32.00	8.5

Table B-4. (continued)
Log Transfer Facilities and Haul and Road Values by Management Area

TTRA MAs	LTF Location	Total LTF Cost	Hauling Cost ($/MBF)	Roads Per 1000 Acre
S25	Blake	80000.00	26.00	8.0
S26	Virginia	80000.00	26.00	8.0
S26	Hoya	80000.00	26.00	8.0
S26	Canal	80000.00	26.00	8.0
S26	Aaron	80000.00	26.00	8.0
S31	Bradfield Canal	80000.00	26.00	8.0
S33	Sunny	80000.00	26.00	8.0
S33	Frosty	80000.00	26.00	8.0
S35	Dry Bay	40000.00	33.00	7.5
S35	Thomas Bay	80000.00	33.00	7.5

Determining Averaged Costs by Management Area(MA). Using the information found on Table B-xx, total cost by MA was calculated. In cases where haul cost or road density values varied in one MA, an average was calculated so that each MA had a singular value for each activity. Since FORPLAN does not provide spatial detail finer than MA boundary any variation in cost within this range would have been erroneous. Total LTF cost by MA was divided by the total available timber acres to determine the LTF cost on a per acre basis. This allowed variation of LTF cost based on the number of acres scheduled for timber harvest. Table B-5 shows the per acre LTF costs by MA.

Table B-5.
LTF Cost per Acre by Management Area

TTRA MA #	Total LTF Costs	Total Acres Avail.	Average Cost Per Acre
C03	80000.0	10367	7.72
C10	400000.0	41378	9.67
C13	320000.0	36148	8.85
C14	240000.0	41960	5.72
C19	0.0	15321	0.00
C21	80000.0	27962	2.86
C22	0.0	0	0.00
C23	80000.0	0	0.00
C24	100000.0	1300	76.92
C25	160000.0	6258	25.57
C27	60000.0	3485	17.22
C28	0.0	22090	0.00
C29	1000000.0	23660	42.27
C30	80000.0	43578	1.84
C31	1280000.0	32139	39.83

Table B-5. (continued).
LTF Cost per Acre by Management Area

TTRA MA #	Total LTF Costs	Total Acres Avail.	Average Cost Per Acre
C32	0.0	9460	0.00
C34	0.0	21283	0.00
C37	740000.0	53761	13.76
C39	160000.0	7509	21.31
C40	640000.0	39129	16.36
C41	1260000.0	25183	50.03
C43	560000.0	24399	22.95
C44	320000.0	21068	15.19
C45	80000.0	6046	13.23
C46	0.0	4860	0.00
C48	320000.0	16367	19.55
C55	0.0	4392	0.00
K01	0.0	46529	0.00
K03	245000.0	61343	3.99
K04	700000.0	15661	44.70
K05	150000.0	33431	4.49
K07	210000.0	83465	2.52
K08	65000.0	70440	0.92
K09	0.0	57975	0.00
K10	130000.0	24855	5.23
K11	210000.0	35841	5.86
K13	70000.0	2990	23.41
K14	110000.0	46225	2.38
K15	0.0	23275	0.00
K17	65000.0	35324	1.84
K18	325000.0	46306	7.02
K19	330000.0	10393	31.75
K20	80000.0	20385	3.92
K21	845000.0	52695	16.04
K22	1020000.0	47095	21.66
K24	65000.0	22479	2.89
K25	325000.0	24588	13.22
K26	200000.0	8975	22.28
K28	325000.0	22826	14.24
K29	140000.0	34007	4.12
K30	340000.0	44011	7.73
K31	325000.0	44635	7.28
K32	670000.0	74867	8.95
K34	0.0	4618	0.00
K35	665000.0	42441	15.67
K39	0.0	28448	0.00
K40	130000.0	3564	36.48
K41	65000.0	15915	4.08
K42	80000.0	7075	11.31
K44	0.0	7642	0.00
K45	80000.0	4681	17.09
S01	40000.0	20274	1.97
S04	0.0	81184	0.00

Table B-5.
LTF Cost per Acre by Management Area

TTRA MA #	Total LTF Costs	Total Acres Avail.	Average Cost Per Acre
S07	160000.0	19418	8.24
S08	80000.0	6701	11.94
S09	360000.0	40441	8.90
S10	0.0	32111	0.00
S11	0.0	36490	0.00
S16	0.0	28108	0.00
S17	0.0	30965	0.00
S18	80000.0	6250	12.80
S19	0.0	49330	0.00
S20	250000.0	23051	10.85
S21	80000.0	8801	9.09
S22	40000.0	6609	6.05
S23	360000.0	54319	6.63
S25	240000.0	42221	5.68
S26	320000.0	28206	11.35
S31	80000.0	8423	9.50
S32A	80000.0	0	0.00
S33	160000.0	13687	11.69
S35	120000.0	22475	5.34

Logging Costs - Temporary Roads, Felling, Bucking, and Skidding. The costs of getting the tree from stump to landing is logging costs. This cost is dependent upon the strata class (number of trees per acre), operability class, and the harvest regime (even or uneven-aged management). These costs are presented in Table. B-6.

Table B-6.
Logging Cost

Strata	Opera-bility	Harvest Regime	Logging Cost ($/MBF) Chatham	Ketchikan	Stikine
Strata A	Normal	Even-age	146.28	176.74	153.22
Strata B	Normal	Even-age	93.18	89.38	90.87
Strata C	Normal	Even-age	71.89	73.08	89.49
Strata D	Normal	Even-age	56.60	68.26	66.78
Strata A	Difficult	Even-age	202.70	243.00	210.50
Strata B	Difficult	Even-age	128.88	122.23	124.83
Strata C	Difficult	Even-age	97.76	99.84	122.42
Strata D	Difficult	Even-age	74.22	91.40	88.81
Strata A	Isolated	Even-age	371.96	441.76	382.37
Strata B	Isolated	Even-age	235.98	220.76	226.72
Strata C	Isolated	Even-age	175.36	180.12	221.22
Strata D	Isolated	Even-age	127.08	160.82	154.91
Strata A	Normal	Uneven-age	182.85	220.93	191.53
Strata B	Normal	Uneven-age	116.48	111.73	113.59
Strata C	Normal	Uneven-age	89.86	91.35	111.86
Strata D	Normal	Uneven-age	70.75	85.33	83.48
Strata A	Difficult	Uneven-age	253.38	303.75	263.13
Strata B	Difficult	Uneven-age	161.10	152.79	156.04
Strata C	Difficult	Uneven-age	122.20	124.80	153.03
Strata D	Difficult	Uneven-age	92.78	114.25	111.01
Strata A	Isolated	Uneven-age	464.95	552.20	477.96
Strata B	Isolated	Uueven-age	294.98	275.95	283.40
Strata C	Isolated	Uneven-age	219.20	225.15	276.52
Strata D	Isolated	Uneven-age	158.85	201.03	193.64

Other Costs used in FORPLAN. Using existing cost information, the following values have been calculated and used in the FORPLAN model. All information is averaged for the Tongass calculated over a span of years.

Timber sale preparation and admin. (Forest Service costs)
- Even-aged management........................ $34/MBF
- Uneven-aged management...................... $44/MBF

Reforestation certification costs............... $10/ACRE

Precommercial thinning cost.................... $350/ACRE

Local, Arterial, and Collector road const... $224,500/MILE

(includes engineering support costs)

Road reconstruction........................ $52,638/MILE
(includes engineering support costs)

Road maintenance............................ $547/MILE/YR

Benefits

The dollar values of outputs used to calculate PNV are the prices consumers would be willing to pay for Forest outputs, whether or not such prices are actually collected by the federal government. Generally many Forest outputs, particularly those with non-market values, are provided either at no charge to consumers or at a charge less than the willingness-to-pay price.

The evaluation of benefits from resource outputs requires a consistent concept of value, although value estimation techniques may vary from resource to resource. For example, timber may be valued using different techniques than minerals or fish, but the concept behind the techniques must be consistent.

For the current Forest plan revision, net willingness to pay is used as the measure of value for forest resource outputs. Net willingness to pay can be simply stated as the total amount one would be willing to pay for a product, minus what they actually have to pay to obtain it. For example, if you valued a product at $15, but had to pay $10 to obtain it, your net willingness to pay would be $15 minus $10 or $5 net. For some outputs, Forest Service fees closely approximate the net willingness to pay value, as in the case of timber stumpage where the value of the end product is first determined, then logging, haul, and manufacturing costs are subtracted to result in the net willingness to pay. For other outputs, such as developed recreation, the fee charged may be less than the net willingness to pay. For some outputs, such as sport fishing, the Forest Service receives no fee.

Outputs must also be valued at a comparable point in the production process. Resources in the Tongass planning process are valued at the point they leave the Forest.

Hunting. Wildlife benefits were taken from the 1990 RPA (Forest and Rangeland Renewable Resources Planning Act of 1974) program. These benefits were derived from a study entitled Economic Value of Big Game Hunting in Southeast Alaska by Cindy S. Swanson, Michael Thomas, and Dennis M. Donnelly. This study was a cooperative effort of the Alaska Department of Fish and Game and the USDA Forest Service. The benefit figures in the study were a result of big game surveys conducted in 1984 and 1985 by Alaska Department of

Fish and Game. These surveys were analyzed to derive expenditure and net willingness to pay dollar values. The big game species analyzed includes Sitka black-tailed deer, mountain goat, and moose. To reduce complexity, the various types of induced wildlife and fish user days (WFUDs) from wildlife improvement projects were modeled and valued as a composite rather than tracked individually in the analysis. The value assigned to the composite was a weighted average of the included WFUD use types, based on historical use patterns. Benefit values used for hunting are found in Table B-7.

Recreation. Recreation benefits were taken from the 1990 RPA program. These recreation benefit figures were derived from a recreation activity survey of visitors to southeast Alaska which was conducted in 1988 by Data Decision Group, Inc. and the Southeast Alaska Marketing Council. The results were analyzed to derive dollar values for net willingness to pay. Primary activities included sightseeing/flightseeing, local entertainment, hiking/biking, fishing, hunting, water craft use (sailing, canoeing, etc.), and visiting friends or relatives. Net willingness to pay, for all recreation activities, was combined to produce an average value for a composite of activities. This study was a cooperative effort of the Southeast Alaska Marketing Council, Data Decisions Group, Inc. and the USDA Forest Service. Benefit values used for recreation are found in Table B-7.

Fish. Values for commercial fish were derived from Alaska Department of Fish and Game data. These data are compiled by the Computer Services Section Staff of the Division of Commercial Fisheries and published annually in the Alaska Catch and Production Commercial Fisheries Statistics Leaflets (Nos. 29 - 38). The commercial fishing industry is the source of all catch and production information for these statistics leaflets. The catch information summarizes the annual fish ticket items. Commercial fisheries businesses who file Alaska Department of Fish and Game fish tickets for all fish caught in Alaska are: 1) the first purchasers of raw fish, 2) each catcher who processed fish, 3) each catcher who exported raw fish, and 4) each catcher who sold to unlicensed buyers (e.g., dockside sales to the general public). An average over the last five years was used to develop the values for planning purposes. No costs were subtracted from the ex-vessel values to arrive at net willingness to pay since it was determined that the majority of the cost of operating the fishing fleet are fixed and do not vary with the amount of harvest. Since the number of vessels and season of harvest are strictly limited by the State of Alaska, there are very few costs which vary with the amount fish caught. Commercial fishermen will incur roughly the same annual costs regardless of the amount of harvests. Therefore, since most of the fishing fleet costs are considered fixed in the short-term they were not

subtracted from the ex-vessel values. Benefit values used for fishing are found in Table B-7.

Table B-7.
Benefits Analyzed Outside Of The FORPLAN Model

Output	Unit	Average Willingness-to-pay value
Commercial Fish		
King Salmon	Pound	2.54
Sockeye Salmon	Pound	1.65
Coho Salmon	Pound	1.30
Pink Salmon	Pound	0.29
Chum Salmon	Pound	0.55
Recreation		
Recreation/Tourism	RVD	20.10
Hunting		
Deer hunting	Hunter day	105.18
Black Bear Hunting	Hunter Day	95.04
Brown Bear Hunting	Hunter Day	95.04

Timber. The timber benefits used on the Tongass are "net willingness to pay" values as reflected in pond log values (log value at the mill) assessed at a middle market over a ten-year period minus logging and log transportation costs. These prices represent net willingness to pay values since they are calculated by taking the price received for logs delivered to the mill and subtracting all of the logging and log transportation costs to arrive at a net timber benefit.

A ten year period is used in determining the middle market in order to include periods of both high and low values caused by short-term market fluctuations. Extrapolations were made from this average value to reflect differences in logging operability class, volume class, species composition, and silvicultural system.

Net willingness to pay values for timber for even-age, uneven-age, and regenerated uneven-age harvest regimes are provided in Table B-8. For simplicity in Table B-8, Haul was averaged ($45/MBF) Forest-wide. Calculated Haul costs (varied from $21 to $67/MBF by each of the TLMP Management Areas) were used in the Model.

Table B-8
Net Willingness to Pay Values Used In FORPLAN Analysis
(1985 Dollars)

Strata	Opera-bility	Harvest Regime	Average Net Willingness To Pay Value ($/MBF)		
			Chatham	Ketchikan	Stikine
Strata A	Normal	Even-age	81.45	50.99	74.51
Strata B	Normal	Even-age	103.43	107.23	105.74
Strata C	Normal	Even-age	131.41	130.22	113.81
Strata D	Normal	Even-age	265.40	253.74	255.22
Strata A	Difficult	Even-age	25.03	-15.27	17.23
Strata B	Difficult	Even-age	67.73	74.38	71.78
Strata C	Difficult	Even-age	105.54	103.46	80.88
Strata D	Difficult	Even-age	247.78	230.60	233.19
Strata A	Isolated	Even-age	-144.23	-214.03	-154.64
Strata B	Isolated	Even-age	-39.37	-24.15	-30.11
Strata C	Isolated	Even-age	27.94	23.18	-17.92
Strata D	Isolated	Even-age	194.92	161.18	167.09
Strata A	Normal	Uneven-age	44.89	6.80	36.21
Strata B	Normal	Uneven-age	80.13	84.89	83.02
Strata C	Normal	Uneven-age	113.44	111.95	91.43
Strata D	Normal	Uneven-age	251.25	236.68	238.53
Strata A	Difficult	Uneven-age	-25.64	-76.01	-35.40
Strata B	Difficult	Uneven-age	35.51	43.83	40.57
Strata C	Difficult	Uneven-age	81.10	78.50	50.27
Strata D	Difficult	Uneven-age	229.23	207.75	210.99
Strata A	Isolated	Uneven-age	-237.22	-324.47	-250.23
Strata B	Isolated	Uueven-age	-98.36	-79.34	-86.80
Strata C	Isolated	Uneven-age	-15.90	-21.85	-73.22
Strata D	Isolated	Uneven-age	163.15	120.97	128.36
	Normal	Regenerated Even-age			
Age 90 years			24.75	25.73	21.55
Age 100 years			29.46	32.09	27.74
Age 110 years			34.17	38.45	33.93
Age 120 years			38.88	44.81	40.12
Age 130 years			43.59	51.17	46.31
Age 140 years			48.30	57.53	52.50
Age 150 years			53.01	63.89	58.69
Age 160 years			57.72	70.25	64.88
Age 170 years			62.43	76.61	71.07
Age 180 years			67.14	82.97	77.26
Age 190 years			71.85	89.33	83.45
Age 200 years			76.56	95.72	87.62

Table B-8 (continued)

Difficult Regenerated Even-age			
Age 90 years	-31.82	-28.83	-36.12
Age 100 years	-24.45	-19.86	-27.46
Age 110 years	-17.08	-10.89	-18.80
Age 120 years	-9.71	-1.92	-10.14
Age 130 years	-2.34	7.05	-1.48
Age 140 years	5.03	16.02	7.18
Age 150 years	12.40	24.99	15.84
Age 160 years	19.77	33.96	24.50
Age 170 years	27.14	42.93	33.16
Age 180 years	34.51	51.90	41.82
Age 190 years	41.88	60.87	50.48
Age 200 years	49.29	69.83	59.16
Isolated Regenerated Even-age			
Age 90 years	-201.57	-192.48	-209.17
Age 100 years	-186.20	-175.69	-193.08
Age 110 years	-170.83	-158.90	-176.99
Age 120 years	-155.46	-142.11	-160.90
Age 130 years	-140.09	-125.32	-144.81
Age 140 years	-124.72	-108.53	-128.72
Age 150 years	-109.35	-91.74	-112.63
Age 160 years	-93.98	-74.95	-96.54
Age 170 years	-78.61	-58.16	-80.45
Age 180 years	-63.24	-41.37	-64.36
Age 190 years	-47.87	-24.58	-48.27
Age 200 years	-32.51	-7.81	-32.21

Non-priced Benefits. In addition to those priced benefits discussed above, there were certain non-priced benefits. Some examples of non-priced benefits are visual quality, old-growth habitat, diversity, research natural areas, wildlife habitat, and primitive areas for recreation. Non-priced benefits obviously have a value to society but are presently not quantifiable. These non-priced benefits were modeled by use of constraints.

In linear programming constraints have a value of infinity. If a management requirement required a certain output level of a non-priced benefit, it was added as a constraint to the FORPLAN model. If a particular alternative required a specific non-priced benefit output level, it was entered as a constraint. Since these constraints were assumed to have a value of infinity, to assure that the output level was reasonable the tradeoffs in terms of PNV and other resources associated with the production of these non-priced benefits was closely examined and displayed in Chapter 3 of the EIS.

Social And Economic Impact Analysis

Introduction

Social and economic impact analysis examines the consequences of different land management decisions on the people and communities in and around the Tongass National Forest. The effect of the alternatives on local communities are measured in terms of Forest Service payments to local governments, changes in job and personal income in a local area, and changes in lifestyle and community structure. Economic analysis identifies the consequences in terms of employment, personal income, and payments to governments while social analysis focuses on changes in lifestyles and structure of those communities in and around the National Forest.

Chapter 3 of the Supplement, Social and Economic Environment section, contains a detailed discussion of the economic and social impacts of the alternatives. In order to limit redundancy, this section will provide an overview and limited discussion of these topics.

Area of Influence

The area or zone of Tongass National Forest influence was established by identifying users of the Forest's resources. Major resources of the Tongass include recreation opportunities, fish and wildlife, timber, minerals, and water. Each resource is used, processed or consumed by different, though overlapping, segments of the population located in varying proximity to the Forest. The area for this analysis has been separated into a primary influence area and a secondary influence area.

The primary influence area for the Tongass National Forest is Southeast Alaska. Local residents make up 2.2 million of the 2.8 million recreation visitor days that occur annually on the Tongass. In 1988, fisheries provided about 3,400 jobs with earnings of nearly $74 million (unpublished report from Forest Service IPASS Model Analysis, December 1988). Rural Southeast Alaska residents harvest fish and wildlife resources for subsistence purposes. Most of the timber sold from the Tongass National Forest is processed by mills in Southeast Alaska. The largest silver mine in North America is on Admiralty Island at Greens Creek in Southeast Alaska. Eighteen Southeast Alaska communities draw their water from the Tongass National Forest for domestic use as do numerous logging camps, fish hatcheries, resorts, mines, and canneries.

The secondary influence area for the Tongass National Forest stretches north and west to include the entire state of Alaska; other Pacific Northwest states especially,

Washington, Oregon, and California; British Columbia; and, Pacific Rim countries, especially Japan.

Sources of Data

Recreation and Tourism. Recreation and tourism is a major industry in southeast Alaska accounting for almost 4000 jobs in 1988. The significance of this industry to southeast Alaska's economy is well documented. Information from the following sources was utilized to estimate potential changes in the recreation and tourism industry due to different management alternatives:

- U.S. Customs data
- Alaska Marine Highway Program - Annual Traffic Reports
- Tongass National Forest recreation user information
- Alaska Dept. of Labor, Research and Analysis Section
- Alaska Dept. of Fish and Game, fishing and hunting records
- USDA Forest Service Demand Analysis
- USDA Forest Service Recreation Information Management (RIM) data for Alaska Region, 1977-88
- Population data and projections for Alaska, Oregon, Washington, and California

Timber Industry. Southeast Alaska's forest product mix includes dissolving pulp, logs, cants, dimension lumber and woodchips. Most of the wood products are exported. Fluctuations in local timber markets are primarily a function of the international marketplace and do not necessarily reflect activities in the region. Information for estimating the impacts of this industry was obtained from the following sources:

- USDA Forest Service, Region 10, Timber Supply and Demand Reports
- 1990 Timber Sale Program Information Reporting System
- ANILCA Draft 1988 Supply and Demand Report
- Alaska Dept. of Labor, Research and Analysis Section
- FORPLAN analysis information

Commercial Fishing. Although the commercial fishing industry continues to fluctuate, it remains a major component of Southeast Alaska's economy. Changes such as an increase in off-shore processors and a trend toward frozen fish rather than canned have made it difficult to forecast the impacts of this industry to Southeast Alaska communities. Analysis of the available data has indicated that Forest Service activity on the Tongass will have no direct impacts on the commercial fishing industry. This is due to the conclusion that no management alternative is predicted to have any adverse affect on fish habitat or populations. Information used includes:

- Alaska Commercial Fisheries Entry Commision, Alaska Dept. of Labor.
- Alaska Catch and Production Commercial Fisheries Statistic Leaflets
- USDA Forest Service Fish Habitat Capability Models
- Summary of ADF&G file fish ticket data

Mining and Mineral Development. Prospects for Alaska's mining industry appear positive, but the interest in mining development fluctuates with world prices due to Alaska's high exploration and development costs. There are currently 13 identified mineral deposits on the Tongass National Forest, that appear economically viable under current market conditions. All alternatives predict the same economic impacts from minerals since all viable deposits are either open to mineral entry or have valid existing rights.

Data sources for minerals include:

- U.S. Bureau of Mines Data
- U.S. Geological Survey
- IPASS Model, Pacific Northwest Experiment Station for base year mining employment

Economic Impact Model

An Interactive Policy Analysis Simulation System (IPASS) was used to estimate the economic effects of alternatives. IPASS is a dynamic simulation model capable of forecasting a number of basic socioeconomic indicators on an annual basis. The IPASS model requires comprehensive data on the economic and social situation for the given base year. Then, using historic information, IPASS will simulate growth and development of an economy for a specified interval of time.

IPASS utilized information obtained from the above sources to predict future economic conditions resulting from Tongass Land Management Planning alternatives. More discussion can be found on IPASS in The Forest Planning Model (Outside of FORPLAN) in this appendix.

Comparison of Alternatives

Jobs, income, payments to state, and economic efficiency (PNV) of each alternative was compared. A detailed discussion of these comparisons and conclusions can be found in the Supplement , Chapter 3, Economic and Social Environment section..

Analysis Prior to the Development of Alternatives

Introduction

The primary analysis prior to the development of alternatives was the Analysis of the Management Situation (AMS). Other analysis pertinent to development of the FORPLAN models are described in this appendix. A comprehensive analysis of resource and economic production capabilities is required in the AMS. This was accomplished in part through benchmark analysis. Using FORPLAN, benchmark analysis is used to provide information on:

- The implications of complying with legal policy constraints, including minimum management requirements of 36 CFR 219.17.
- The effects of economic and other modeling assumptions.
- The schedule of management activities, resource outputs, effects, costs, and PNV associated with each resource.
- The potential need to resolve issues and concerns.
- The need to change the current management direction.

All benchmarks were designed to be implementable and are not constrainted by budgets.

Development of Management Requirements

The following is a listing of the management requirements, including a discussion of how they were modeled in FORPLAN. By definition, these requirements represent minimum constraints to meet the intent of applicable laws and implementing regulations. Management requirements assure that a viable level of resources will be provided over the length of the planning horizon. They are:

<u>Capable, Available, and Suitable Timber Lands</u> - During the analysis of the management situation, NFS lands were stratified into two broad categories: (1) lands suitable for timber production; (2) lands not suitable for timber production. Lands were identified as suitable for timber production if they met the following conditions:

1) The land is forested and is currently producing or is capable of producing crops of industrial wood.
2) The land has not been withdrawn from timber production by Congress, the Secretary of Agriculture, or the Chief of the Forest Service.
3) Technology and knowledge exist and are available to ensure timber production without irreversible damage to soils, productivity, or watershed conditions.
4) Existing technology and knowledge, as reflected in current research and experience, provide reasonable

assurance that adequate restocking can be attained within 5 years after final harvest.

5) Adequate information is available to project responses to timber management activities.

Threatened and Endangered (T&E) Species: Following are the various requirements of T&E species and the corresponding adjustments made in FORPLAN:

> Emphasize threatened and endangered species habitat protection and improvement in resource management and fire suppression activities (FSM 2670). The species involved include the peregrine falcon which migrates through the planning area and eight species of whales which utilize the ocean environment adjacent to the Forest. There are no threatened or endangered fish species found on the Forest or any other wildlife threatened or endangered species on the Forest.

Peregrine falcon nesting areas are protected through standards and guidelines forest-wide. Most of the nesting locations occur on the outer coastline and generally are located within existing Wilderness, legislated LUD II or other natural setting prescriptions so additional constraints were not applied through FORPLAN.

Best Management Practices, 100-foot stream buffers on anadramous fish streams and important resident fish streams that flow into anadromous streams, and standards and guidelines to avoid human harassment provide the protection needed for whales. No additional FORPLAN constraints were applied.
The protection measures outlined here ensure this management requirement will be met under all alternatives.

Viable Wildlife Populations - NFMA implementing regulations direct that: "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well-distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well-distributed so that those individuals can interact with others in the planning area" (CFR 219.19).

Population changes of Management Indicator Species (MIS) are believed to reflect the effects of land management activities. Evaluation of all species occurring within a planning area can be reduced through this concept to a

Forest-wide, there are 5.05 million acres of productive old growth and 3.4 million acres of unproductive old growth. Every ecological province contains both productive and unproductive old growth. The maximum potential effects scenario shows that after 150 years, approximately 3.64 million acres of productive old growth (67 percent of 1954) will still remain on the Tongass under any of the fivealternatives.

This habitat for old-growth associated wildlife with travel corridors that include beach fringe (about 11,000 miles of beach), 100-foot stream buffers on all Class I and all Class II streams that flow into Class I streams (over 20,000 miles forest-wide), 3.4 million acres of unproductive old growth, research natural areas and natural setting prescriptions common to all alternatives (2.87 million acres) provide for viable populations well-distributed. The maximum dispersal distance between habitats is 25 miles with many significantly less. There is no conclusive scientific evidence on the Tongass that any of the MIS need less than a 25-mile dispersal distance.

Ecological Provinces and Wildlife Populations - Wildlife species are abundant on the forest, although, their habitat and range is specific to small areas or ecological provinces.
The wildlife analysis (done outside of FORPLAN) shows that the Wilderness areas, legislated LUD II areas, and the natural setting land use designations common to all alternatives provide adequate habitat to ensure viable populations. Beach and estuary fringe, unproductive old growth, research natural areas, special interest areas, and TTRA 100 foot no commercial timber harvest buffers on all Class I streams and all Class II streams that flow into Class I streams provide the travel corridors to link habitats. Therefore, no other constraints were applied in FORPLAN to account for habitat for viable populations.

The following text describes the general distribution of species, by each of 21 ecological provinces, for the forest.

Black Bear
Black bear are present in all ecological provinces except for the five provinces which comprise Admiralty, Baranof, and Chichagof Islands. The estimated worst case Forest-wide habitat capability after 10 years is 11,064 bears; this is 76 percent of the black bear habitat capability that existed in 1954. This estimated habitat capability ranges from 99 bears in province #17 to 1,349 bears in province #20. Each of the alternatives increases the habitat capability for black bears by varying amounts above the levels described here.

Brown Bear
Brown bear are present in all ecological provinces except for the seven provinces which comprise the islands south of Frederick Sound. The estimated worst case Forest-wide habitat capability after 150 years is 5,576 bears; this is 90 percent of the brown bear habitat capability that existed in 1954. This estimated habitat capability ranges from 74 bears in province #1 to 1,391 bears in province # 7. Each of the alternatives increases the habitat capability for brown bears by varying amounts above the levels described here.

Sitka Black-tailed Deer
Deer are present in all ecological provinces except the two provinces at Yakutat. The estimated worst case Forest-wide habitat capability after 150 years is 177,575 deer; this is 62 percent of the deer habitat capability that existed in 1954. This estimated habitat capability ranges from 202 deer in province #21 to 30,693 deer in province #7. Each of the alternatives increases the habitat capability for deer by varying amounts above the levels described here.

Mountain Goat
Mountain goat are present in 11 ecological provinces. Historically, mountain goats were only present on the mainland (8 of the ecological provinces). Through cooperative transplant work, mountain goats are now present on Revilla and Baranof Islands. The estimated worst case Forest-wide habitat capability after 150 years is 8,410 mountain goats; this is 98 percent of the mountain goat habitat capability that existed in 1954. This estimated habitat capability ranges from 3 animals in province #1 to 2,913 animals in in province #21. Each of the alternatives increases the habitat capability for mountain goats by varying amounts above the levels described here.

Marten
Marten are present in all ecological provinces. Historically, they were only present on the mainland (8 provinces) and possibly Mitkof, Kupreanof, and Kuiu Islands (2 provinces). Through cooperative transplant work, marten are now present on most of the islands (see Wildlife Section for additional information on marten distribution). The estimated worst case Forest-wide habitat capability after 150 years is 11,505 marten; this is 67 percent of the marten habitat capability that existed in 1954. This estimated habitat capability ranges from 95 animals in province #17 to 1,597 animals in province # 7. Each of the alternatives increases the habitat capability for marten by varying amounts above the levels described here.

Red Squirrel
Red squirrels are present in all ecological provinces except four (provinces 14, 16, 17, 18). Historically, they were only present on the mainland (8 provinces). Through cooperative transplant work, red squirrels are now present on most of the islands except the four provinces listed above. The estimated worst case Forest-wide habitat capability after 150 years is 5,364,545 animals; this is 80 percent of the red squirrel habitat capability that existed in 1954. This estimated habitat capability ranges from 133,938 animals in province #5 to 665,102 animals in province #7. Each of the alternatives increases the habitat capability for squirrel by varying amounts above the levels described here.

Wolf
Wolf are present in all ecological provinces except the five provinces which comprise Admiralty, Chichagof, and Baranof Islands. The estimated worst case Forest-wide habitat capability after 150 years is 536 wolves; this is 63 percent of the wolf habitat capability that existed in 1954. This estimated habitat capability ranges from 3 animals in province #2 to 86 animals in each of provinces 14 and 15. Each of the alternatives increases the habitat capability for wolf by varying amounts above the levels described here.

River Otter
River otter are present in all ecological provinces. The estimated worst case Forest-wide habitat capability is after 150 years 5,618 animals; this is 69 percent of the otter habitat capability that existed in 1954. This estimated habitat capability ranges from 20 animals in province #2 to 578 animals in province #3. Each of the alternatives increases the habitat capability for river otter by varying amounts above the levels described here.

Bald Eagle
Bald eagles are present in all ecological provinces. The estimated worst case Forest-wide habitat capability after 150 years is 12,143 eagles; this is 60 percent of the eagle habitat capability that existed in 1954. Current estimated eagle population in 1990 is 12,000. This estimated habitat capability ranges from 26 eagles in province #2 to 1,187 eagles in province #3. Each of the alternatives increases the habitat capability for bald eagles by varying amounts above the levels described here.

Red-breasted Sapsucker
Red-breasted sapsuckers are present in all ecological provinces. The estimated worst case Forest-wide habitat capability after 150 years is 647,663 birds; this is 66

percent of the red-breasted sapsucker habitat capability that existed in 1954. This estimated habitat capability ranges from 4,750 birds in province #17 to 93,461 birds in province #7. Each of the alternatives increases the habitat capability for red-breasted spasuckers by varying amounts above the levels described here.

Hairy Woodpecker
Hairy woodpeckers are present in all ecological provinces. The estimated worst case Forest-wide habitat capability after 150 years is 64,022 birds; this is 54 percent of the hairy woodpecker habitat capability that existed in 1954. This estimated habitat capability ranges from 473 birds in province #17 to 12,278 birds in province #7. Each of the alternatives increases the habitat capability for hairy woodpeckers by varying amounts above the levels described here.

Brown Creepers
Brown creepers are present in all ecological provinces. The estimated worst case Forest-wide habitat capability after 150 years is 52,879 birds; this is 37 percent of the brown creeper habitat capability that existed in 1954. This estimated habitat capability ranges from 311 birds in province #17 to 14,449 birds in province #7. Each of the alternatives increases the habitat capability for brown creepers by varying amounts above the levels described here.

Vancouver Canada Goose
Geese are present in all ecological provinces. The estimated worst case Forest-wide habitat capability after 150 years is 14,369 geese; this is 70 percent of the goose habitat capability that existed in 1954. This estimated habitat capability ranges from 8 geese in province #2 to 2,164 geese in province #10. Each of the alternatives increases the habitat capability for geese by varying amounts above the levels described here.

Snag-dependent Species - To provide habitat for snag-dependent species, a minimum of 275 snags per 100 acres were maintained within 3rd order watersheds. These snags must be a least 15 inches DBH and ten feet tall. This requirement was not anticipated to significantly affect the production of other resources, therefore was not modeled in FORPLAN.

Diversity - A diversity of plant and animal communities was achieved by providing viable populations of all management indicator species which are well distributed throughout the Forest. Diversity is also maintained through dispersal and shape of harvest units, maintaining as large of contiguous blocks of old growth as possible and the existing Wilderness areas. In addition, no type conversion was allowed in any alternative.

Riparian Areas - Riparian areas were defined as a minimum of 100 horizontal feet distance on each side of streams, lakes and other bodies of fresh water, or to the recognizable area dominated by associated riparian vegetation, whichever is greater. To determine where the riparian vegetation is located, a combination of soils, plant associations and channel types are used. Riparian area is also defined as very high landslide and erosian hazard areas adjacent to streams; these were also documented in the GIS database.

For modeling purposes riparian areas acreage were estimated as follows:

1) Delineating a 150 horizontal foot buffer around all B3, B5, B8, C1, C3, C6, D3, D4, D5 and L2 channel types.
2) Delineating a 100 horizontal foot buffer around all remaining channel types.
3) Including all areas inventoried as riparian soils which are adjacent to a stream or lake.

No practices or prescriptions will be applied to these areas that cause detrimental changes to water quality, aquatic flora and fauna, and/or hydrophytic vegetation within the area.

Timber harvesting, developed recreation, ORV (off-road vehicle) trails, and related uses are not considered riparian area dependent, though they are permitted to occur when compatible with riparian dependent resources.

Intermittent and ephemeral channels were acknowledged to be important to riparian areas but were not constrained as part of the MRs.

Table B-9 represents how the standards and guidelines for riparian areas were applied in the FORPLAN model.

Table B-9.
Riparian Timber Harvest Regimes By Land Use Designation

GIS Land Unit	Land Use Designation	
	Stream And Lake Protection	Fish Habitat/Water Quality
100 Foot Lake Buffers	No Harvest - Reg. Class 0	No Harvest - Reg. Class 0
Riparian Soils Areas	Individiual Tree Selection Reg. Class 3	Individual Tree Selection Reg. Class 3
100 Foot TTRA Stream Buffers	No Harvest - Reg. Class 0	No Harvest - Reg. Class 0
Additional Variable Width Buffers For Class 1 and 2 Streams Beyond 100 Feet	No Harvest - Reg. Class 0	No Harvest - Reg. Class 0
Class 3 Buffers With Channel Types, A3, B5, D1, OR D6	No Harvest - Reg. Class 0	No Harvest - Reg. Class 0
Class 3 100' Buffers Not In Channel Types A3, B5, D1, OR D6	Restricted Even-aged Reg. Class 2	Intensive Even-aged Reg Class 1

Soil and Water Productivity - This constraint removed approximately 850,000 acres with oversteepened slopes, very high erosion potential, or high instability, from the tentatively suitable land base. No activities were allowed which have the potential to accelerate erosion or mass movement. "Oversteepened slopes" are slopes in excess of the natural angle of repose. Very high erosion potential is defined in Appendix A in the Proposed Revised Forest Plan.

Timber Policy Constraints - The following is a listing and discussion of timber policy constraints and how they were modeled.

Rotation Age and Culmination of Mean Annual Increment (CMAI) - For benchmarks and alternatives, minimum rotations were based on culmination of mean annual increment measured in utilized cubic feet of merchantable size trees. Mean annual increment is equal to the timber volume in a stand divided by the age of that stand. The largest number produced by this calculation over the life of a stand is called the culmination of mean annual increment. It is the point at which the volume increment of a stand of trees has reached its highest value.

Regenerated timber stands were regarded as generally culminated in growth at the age that corresponds to 95 percent of the apparent culmination that was calculated from the managed yield projections used in FORPLAN. Culmination, by definition, will always be later than or equal to the age of merchantability. Merchantability occurs when the average projected diameter breast height is 9 inches, with a 12 foot log and a 6 inch top. This constraint insures that nearly all trees in the projected stand will be minimally merchantable or larger at first harvest. Minimum rotation ages for various conditions are presented in Table B-10.

Table B-10 - R10-Assumption: Minimum age for attainment 95 percent of Culmination of Mean Annual Increment (for standard even-aged management)

ADMINISTRATIVE AREA	AVERAGE SITE INDEX (FARR 50 YR. BASE)	FORPLAN PERIOD	AGE	THINNING
Chatham Area	100	10	100	Without Thinning
Chatham Area	80	12	120	Without Thinning
Chatham Area	60	14	140	Without Thinning
Chatham Area	100	9	90	With Thinning
Chatham Area	80	10	100	With Thinning
Ketchikan Area	100	10	100	Without Thinning
Ketchikan Area	80	11	110	Without Thinning
Ketchikan Area	60	12	120	Without Thinning
Ketchikan Area	100	9	90	With Thinning
Ketchikan Area	80	10	100	With Thinning
Stikine Area	100	9	90	Without Thinning
Stikine Area	80	12	120	Without Thinning
Stikine Area	60	14	140	Without Thinning
Stikine Area	100	8	80	With Thinning
Stikine Area	80	11	110	With Thinning

Harvest Flow Requirements - When nondeclining yield (NDY) was not applied, harvest flow constraints were used. The primary function of these harvest flow constraints is to provide for community stability through prevention of erratic flows of timber outputs between periods (i.e., to prevent one period having extremely high outputs and the next period zero outputs). The current allowable sale quantity of 450 MMBF is presently divided into Alaska Pulp Corporation, Ketchikan Pulp Corporation, and the independent sale program. Under a relatively high market, 150 MMBF was assumed to be the average volume needed to keep each portion of the sale program in business. The Forest then calculated the percentage of current allowable sale quantity represented by 155 MMBF. This was determined to be 33 percent. FORPLAN was allowed to determine the timber output for decade 1. In subsequent decades, the timber output was allowed to fluctuate 33 percent (plus or minus) from the previous decade's output.

Dispersion - The intent of the dispersion rule is to prevent regeneration units that are still "openings" from being adjacent to each other. The intent is also to disperse units in such a way as to leave logical harvest units between openings for future management. Regeneration harvest units (which are considered openings) may, on a case-by-case basis, have up to 15 percent of the periphery in common with other openings. Nonsuitable timber lands were included in the calculation of manageable units. This requirement is in effect until the harvest unit is no longer considered an opening.

An opening created by timber harvesting using even-aged methods was no longer considered an opening once the number of trees defined below have reached 4.5 feet in height and are free to grow.

To model dispersion, each Management Area (Level 1) was constrained to allow no more than 50 percent of the suitable forest land to be harvested in any 30 year period in the Timber Production Land Use Designation (LUD).

Lands allocated to Modified Landscape and Scenic Viewshed LUDs have a more restrictive dispersion constraint placed on them. For each Management Area, the lands allocated to these LUDs where analyzed in terms of Visual Quality Objectives (VQO), Visual Absorption Capability (VAC), and Sensitivity Level. Incorporating the Forest-wide Guidelines for timber harvesting activities in these areas, average dispersion and disturbance factors where calculated for each Management Area. A forest-wide average shows approximately 17 percent of the suitable forest lands could be harvested every 30 years.

Minimum implementation requirements (MIRs) - MIRs ensure that alternatives are minimally acceptable and implementable on the ground. Generally the requirements in this category are within agency control, but at the Forest level, there is little discretionary control regarding their application on the ground.

Minimum implementation requirements are common to all alternatives. The three Tongass constraints that make the alternatives acceptable and implementable are 1) maintenance of a 330-foot buffer around bald eagle nests, 2) protection of sensitive plants, and 3) maintaining a non-declining even flow of timber on each Administrative Area of the Forest. Each of these constraints is described below:

1. The Bald Eagle Protection Act dictates that bald eagle habitat will be given special protection. A Memorandum Of Understanding with the U.S. Fish and Wildlife Service and the Forest Service established a minimum 330-foot radius eagle nest zone around each eagle nest tree. Within these eagle nest zones all land use activities which would likely disturb the eagles were prohibited. These buffers were removed from the suitable forest lands for 7,022 inventoried eagle nests.

2. Candidate sensitive plants will be managed to insure that the species do not become threatened or endangered because of Forest Service actions. This MIR was not modeled in FORPLAN. The affected acreage is small, and the Standards and Guidelines ensure this requirement will be met under all alternatives through site specific project analysis.

beyond culmination of mean annual increment. Forest policies and budgets were not constraints.

The term "rollover" is used freqently in the specifications. All FORPLAN runs generally are run with a maximum present net value objective function in order to find the most cost efficient mix of resource uses. However, in some cases, specific resources are analyzed individually for the first decade to determine the maximum potential of an individual resource. After the first decade, the objective function is generally changed back to the maximum present net value objective function. This changing of the objective function is often referred to as a "rollover". The objective functions and "rollovers" are specified in each FORPLAN run and are listed in the discussions.

Tongass Timber Reform Act. The Tongass Timber Reform Act designated 299,697 acres of national forest lands as Wilderness and 724,288 acres as legislated LUD II (no commercial timber harvest). Prior to legislation, the five newly formed Wilderness Areas and one Wilderness Addition and 12 legislated LUD II areas contained about 367,876 acres of tentatively suitable forest lands. The Act also established 100 foot no commercial harvest stream buffers on all Class I and those Class II streams that flow directly into Class I streams which contained about 126,992 acres of tentatively suitable forest lands.

Prior to the Act, outside of existing Wilderness, there were 3.06 million acres of tentatively suitable forest lands. After the Act, there is 2.56 million acres of tentatively suitable forest lands. Therefore, the maximum timber, maximum present net value, and current Plan benchmarks change from what was displayed in the June, 1990 DEIS. All other benchmarks performed in the June, 1990 DEIS, such as maximum fish, maximum wildlife, and maximum wilderness are not affected by the November, 1990 Tongass Timber Reform Act and therefore were not recomputed. They remain essentially the same as it relates to the management situation. Since only the three benchmarks mentioned change, they are the only one's that affect any change in decision space for alternative formulation.

The current Tongass Plan is the start point for the Revision (no action). Updates to existing inventories, yield tables and the like were made in the analysis of the Current Plan Benchmark, other Benchmarks, and the Alternatives. No new or more binding constraints were imposed as it relates to Management Requirements (36 CFR 219.27) in any analysis except for the proportional timber harvest and 100 foot stream buffer requirements of the November, 1990 Tongass Timber Reform Act. The proportional timber harvest constraint was applied to every Benchmark and Alternative analyzed for the Supplement. Since the current Plan is the

"no action" in terms of a Revision, no additional analysis regarding Management Requirements was performed.

The following discussion presents the description, purpose, specifications, and other assumptions of the maximum timber, maximum present net value, and current Plan benchmark analysis.

(PNV) MAX PNV Assigned with MR-NDY-CMAI

Description and Purpose:

This benchmark defines and evaluates the management requirements. It shows the opportunity cost of all the Management Requirements (36 CFR 219.27) (MR's) taken collectively when compared to the FLW benchmark. Then, when additional constraints are imposed, this benchmark displays the opportunity costs of those additional constraints. It estimates the mix of resource uses and provides a schedule of outputs and costs that will maximize the Present Net Value (PNV) of those outputs that are assigned a monetary value, subject to meeting MR's. Dollar values are based on actual or simulated market prices (willingness-to-pay) for timber, recreation, fish, and wildlife

Specifications:

1. Objective Function: MAX PNV for 16 periods.

2. Timber policies:
   a. Minimum rotation: The full set of rotation ages greater than or equal to 95 percent of culmination of mean annual increment (CMAI) are used.
   b. Nondeclining yield requirement.
   c. Dispersion.

3. Landbase: all tentatively suitable lands available.

4. Management Requirements:
   a. Minimum riparian requirement.

5. Economic Assumptions:
   a. Net willingness to pay values for timber, wildlife, recreation, commercial fish, and sport fish.
   b. Costs as determined by Forest unit cost study.
   c. No value or cost trends for outputs or activities.
   d. Demand cutoffs for RVDs and WFUDs are used.

6. No rollover is required.

7. Output Constraints: None.

8. Activity Constraints: None.

9. Budget Constraints: None.

(TBR) Max Timber for 1 Period with NDY-CMAI-MR's

Description and Purpose:

This benchmark defines the maximum timber output possible for the first decade under current policy and management requirements. If no other resources mattered beyond their minimum tolerable level, this benchmark indicates the maximum timber that could be sustained without economic considerations.

Specifications:

1. Objective Function: MAX timber for 1 period.

2. Timber Policies:
   a. Minimum rotation: The full set of rotation ages greater than or equal to 95 percent of culmination of mean annual increment (CMAI) were used.
   b. Nondeclining yield requirement.
   c. Dispersion.

3. Landbase: All tentatively suitable land.

4. Management Requirements:
   a. Minimum riparian requirement.

5. Economic Assumptions:
   a. Net willingness to pay values for timber, wildlife, recreation, commercial fish, and sport fish.
   b. Costs as determined by Forest unit cost study.
   c. No value or cost trends for outputs or activities.
   d. Demand cutoffs for RVDs and WFUDs are used.

6. A rollover is required to determine the most economically efficient allocation and other resource outputs which can still be produced while meeting the timber harvest levels for the first period defined in the base run run.

The specifications for this rollover are the same as the base run with the following exceptions:

   a. Objective Function: Maximize PNV for 16 periods.
   b. Output Constraint: Meet timber outputs from the first period as defined by the base run.

7. Output Constraints: None.

8. Activity Constraints: None.

9. Budget Constraints: None.

(CUR) Current Level

Description and purpose:

This benchmark estimates the effects of the Tongass Timber Reform Act on the Forest's ability to maintain the current level of outputs and services in the future with the continuation of the existing land allocations, direction, policies, and practices as modified by the Revision (23 land use designations instead of 4; new standards and guidelines and monitoring plan).

This alternative was designed to assess the effects of TTRA and the attempt to mimic the current set of land use designations and management direction with currrent analytic techniques, yield tables, and any other pertinent new information since the 1985-86 TLMP As Amended.

The current Plan called for 273,000 acres be retained for fish and wildlife and 244,000 acres for the visual resource. Since the TTRA removed 494,868 acres of tentatively suitable forest lands from the current Plan (1,023,985 acres total), it was assumed that TTRA more than adequately provided for the fish, wildlife, and visual "retention" in the current Plan and therefore, no additional constraints were applied.

Specifications:

1. Objective Function: MAX TIMBER for one decade.

2. Timber Policies:
   a. Minimum rotation: The full set of rotation ages greater than or equal to 95 percent of culmination of mean annual increment (CMAI) was used.
   b. Sustained yield requirements.
   c. Nondeclining yield requirement.
   d. Dispersion.

3. Landbase: All tentatively suitable land currently in a LUD III or LUD IV.

4. Management Requirements:
   a. Minimum riparian requirement (Prescription #13)

5. Rollover - Maximum PNV for 16 decades.

6. Output Constraints:
   a. 4.5 Billion board foot per decade floor.
   b. No more that 50 percent of the ASQ in the first decade could come from high volume old-growth.
   c. At least 7 percent of the ASQ in all decades had to come from difficult harvesting areas (long span skyline and access limited).

d. None of the ASQ could come from isolated timber stands.

7. Activity Constraints:
   a. No harvest in 330-foot inventoried eagle nest buffers
   b. Limited visual disturbance in LUD III.
   c. No harvest in any LUD III special (yellow cross-hatched areas on the current LUD map).
   d. No more than 63,000 acres/decade of second growth can be precommercially thinned.

8. Budget Constraints: None

Benchmark Results - The following discussion describes the information provided by the analysis of each benchmark. Table B-11, following the description of the benchmarks, displays the outputs, cost, and present net value (PNV) of each benchmark.

<u>(PNV) MAX PNV Assigned with MR-NDY-CMAI</u>

Some of the significant findings from this benchmark which illustrate the most economic solution for the Forest are listed below:

1. The timber harvest level is 420 MMBF annually in the first decade. This is a 7 percent decline over the ASQ in the current Forest plan.

2. The long-term sustained yield capacity of the Forest is 136 MCF annually. This indicates the long-term timber production capability of the Forest is significantly higher than present harvest levels due to the anticipated growth rates on second growth stands.

3. Reforestation is 14,000 acres per year in the first decade. This is a 21 percent decline over the current level. This rate of reforestation will result in 70,000 acres of additional second growth stands over 50 years.

4. 138 miles of new roads would be constructed per year dung the first decade.

<u>(TBR) MAX Timber for 1 Period (Management Requirements and Timber Policy Constraints)</u>

Some significant findings from this benchmark are listed below:

1. The maximum timber production level subject to management requirements and timber policy is 704 MMBF per year in the first decade.

2. The maximum long-term sustained yield of the Forest subject to management requirements and timber policy constraints is 212 MCF per year. This is much higher than the short-term harvest levels due to the existing age class distribution (predominantly older stands) and the anticipated growth rates on regenerated timber stands.

3. This maximum timber production level will require an increase in reforestation from 17,000 acres per year to almost 23,000 acres per year in the first decade.

4. First decade road construction would be about 357 miles per year.

(CUR) Current Level

Significant findings from this benchmark are listed below:

1. The current allowable sale quantity of 450 MMBF per year cannot be maintained; it falls to 440 MMBF.

2. Reforestation would decline due to lower volume stands being treated.

3. The current Plan scheduled 1.74 million of the then 2.3 million acres that were suitable and available. With new yield tables, a mix of rotation ages allowed and other new information in this Version 2 FORPLAN model, 1.773 million acres were scheduled for harvest over the planning horizon attaining a decadal ASQ of 4.4 billion board feet with 1,938,977 acres.

A summary of the Benchmark results are listed in Table B-11.

Table B-11.
Summary Of Benchmark Results After 1990 Tongass Timber Reform Act

Outputs/Effects (Unit of Measure)	Maximum PNV	Maximum Timber	Current (No Action)
Wilderness (acres)	5,753,211	5,753,211	5,753,211
Commercial Fish Enhancement (Millions of pounds)	8.2	8.2	8.2
Commercial Fish Production Without enhancement (Millions of Pounds)	110.6	110.6	110.6
Fish Habitat Capability Without Enhancement Projects			
Pink Salmon (Millions of smolts)			
1954	2,394	2,394	2,394
1988	2,454	2,454	2,454
2000	2,454	2,454	2,454
2150	2,454	2,454	2,454
Coho Salmon (Millions of smolts)			
1954	19.1	19.1	19.1
1988	19.1	19.1	19.1
2000	19.1	19.1	19.1
2150	19.0	19.0	19.0
Dolly Varden (Millions of fish)			
1954	67.9	67.9	67.9
1988	67.4	67.4	67.4
2000	67.2	67.2	67.2
2150	66.5	66.5	66.5
Suitable Lands scheduled for timber harvest (thousands of acres)	1,426	2,467	1,773
Allowable Sale Quantity			
Decade 1 (MMBF)	420	704	440
Decade 1 (MCF)	96	163	96
Decade 5 (MMBF)	399	635	414
Decade 5 (MCF)	96	163	96
Long Term Sustained Yield (MCF)	136	212	143
Utility Volume			
Decade 1 (MMBF)	84	144	88
Decade 5 (MMBF)	80	130	81
Decade 1 (MCF)	20	34	21
Decade 5 (MCF)	20	34	21
Reforestation (Acres)			
Decade 1	14,000	23,000	13,000
Decade 5	15,000	29,000	16,000

Table B-11 (cont.)
Summary Of Benchmark Results

Outputs/Effects (Unit of Measure)	Maximum PNV	Maximum Timber	Current (No Action)
Precommercial Thinning (Acres)			
Decade 1	0	0	0
Decade 5	0	13,000	3,700
Timber Harvest by Harvest Method (%)			
Clearcut	100%	100%	100%
Shelterwood	0%	0%	0%
Group Selection	0%	0%	0%
Tree Selection	0%	0%	0%
Annual Road Construction			
Decade 1	138	357	343
Decade 5	60	116	75
Gross Revenue from Timber Program (Millions of Dollars)	79.5	128.2	84.9
Total Cost of Timber Program (Millions of Dollars)	44.3	105.2	93.2
Net Revenue from Timber Program (Millions of Dollars)	35.2	23.0	-8.3
Payments to State (Millions of Dollars per year)	19.9	32.1	21.2

Benchmark Conclusions - This section explains conclusions the Forest reached as a result of the benchmark analysis. It includes discussions of the interactions between benchmarks and what was learned cumulatively from them.

Timber Allowable Sale Quantity.

- The most economically efficient timber harvest level is 420 MMBF per year.
- The current harvest level of 450 MMBF cannot be sustained over time without isolated stands being available for the model to select.
- The maximum timber harvest level that can be produced without relaxing constraints is 704 MMBF in the first decade.

Long-term Sustained Yield.

- The long-term sustained yield capacity of the forest is much greater than the short-term harvest opportunities. This is a result of a skewed age class distribution of the Forest towards older stands which are producing no

growth. Once these are replaced with young fast growing stands the harvest levels will be able to be increased.
- The long-term sustained yield is dramatically reduced by removing acres from the suitable land base forest lands.

Reforestation.

- The amount of reforestation is directly linked to the timber harvest level. Those benchmarks which have the higher timber harvest levels also require the higher amounts of reforestation.

Road Construction.

- The amount of road construction is directly linked to the timber harvest level. Those benchmarks which have the higher timber harvest levels also require the higher amounts of road construction.

Forest Service Cost.

- Changes in Forest Service costs between benchmarks are directly tied to the timber harvest level in that benchmark. Since the resource production levels for resources other than timber are relatively constant between the benchmarks, their associated costs are also constant. The primary output, and hence cost, which varies between the benchmarks is timber.

Other Benchmarks displayed in the June, 1990 DEIS were not significantly affected by the November 1990 Tongass Timber Reform Act and, therefore, were not re-analyzed.

Stage II Analysis

Prior to the formulation of alternatives, each acre classified as tentatively suitable for timber harvest was analyzed to determine the costs and benefits for a range of management intensities (36 CFR 219.14(b)). For the purpose of this analysis, the planning area was stratified into categories of land with similar costs and returns. The stratification also took into account those factors which influence costs and returns such as physical and biological conditions of the site and transportation requirements.

Stage II analysis was conducted for two management intensities: Even-aged and uneven-aged management. These management approaches, as well as their differing analysis processes, are discussed below.

Even-aged Management -- The Existing Forest. Stands managed under an even-aged regime are very homogeneous in terms of age and size class. When the stand is ready for harvesting it is clearcut; all the standing timber is removed.

Regeneration follows and this process is repeated. The age at which harvest occurs is call the rotation age. Rotation ages vary from 20 to several hundred years depending on the productivity of the site, species of tree, and desired wood products.

The first analysis conducted was to determine the value of applying even-aged management to the existing forest stands. This is simply the value of clearcutting one acre.

All lands identified as tentatively suitable were aggregated by components significant to determining the individual economic values by forest acre. These components are:

TTRA MA # - Modified TLMP Management Areas to conform to the Tongass Timber Reform Act - Each area has specific road construction and haul cost which are incurred when timber is harvested.

Log. Oper - Logging Operability - This component is a primary factor in determining the logging cost. Normal operablity is standard cable and tractor, difficult requires long span skyline techniques, and isolated requires the use of helicopter logging.

Road/Unroad - Determines whether new roads must be constructed or less expensive reconstruction is needed.

Vol Class - Volume class for existing old-growth stands is sub-divided into four classes:

Strata A - 8-20 MBF/acre
Strata B - 20-30 MBF/acre
Strata C - 30-50 MBF/acre
Strata D - 50+ MBF/acre

The volumes used in the analysis have been statistically adjusted to account for unstocked areas within each strata and the reliability of inventory data.

The following costs and values were applied to the forest stands to determine economic viability of the existing timber.

Sawlog MBF/ac - This is the merchantable sawlog volume in MBF (thousands of board feet) per acre.

$/MBF - This is the value of each MBF of sawlog timber less logging costs (temporary roads, felling, bucking, skidding). This is the value of the timber at the landing.

FS admin $/MBF - This is the cost to the Forest Service to administer the timber sale.

Regen cost $/acre - This is the cost to the Forest Service to certify that the stand, once harvested, has successfully regenerated.

Haul cost $/MBF - This is the cost of transporting the logs from the landing to the mill site. It is dependent upon the distance the logs must be moved and the mode of transportation required (truck, tug, etc.)

Road miles per 1000 acres - This is the number of road miles required to access 1000 acres of suitable available timber. If the area is currently roaded then this many miles of road must be reconstructed to access 1000 acres. If the area is in an unroaded condition then this many miles of new construction must take place to access 1000 acres. Road reconstruction costs $52,638 per mile and new road construction costs $224,500 per mile.

The costs may seem high but a significant portion is Forest Service engineering support costs. These costs were derived by taking a three year average of actual costs (1984-1987). These costs were then re-checked in 1990 and found still valid.

LTF cost $/ac - Log Transfer Facilities (LTF) are used to place the logs into the water for transportation by log raft or barge. Construction, or reconstruction, of these facilities is takes place when an area is scheduled for harvest. For modeling purposes, total LTF cost of an area was divided by the total number of tentatively suitable acres. This "per acre" value would then be applied to every acre receiving a timber management prescription.

Sawlog Total Revenue - This is the total value of one acre of sawtimber at the landing. It is obtained by multiplying the MBF/ac by the $/MBF value.

Sawlog Total Costs - Sum of Forest Service administrative costs, haul costs, road costs, and LTF costs.

Net Sawlog Revenue - This is the difference between total sawlog revenue and total sawlog costs.

Utility Volume MBF/ac - Utility volume is those logs that have less than 33 1/3 percent net sawlog volume (the volume that can be used for industrial wood products) but contain at least 50 percent firm usable pulp chips. Utility volume forest-wide 1980-90 averaged 14 percent of the total harvest volume.

Net Utility Revenue - This is the net revenue obtained from the utility volume. The net utility values shown on the table are positive when sawlog revenue is negative; the net sawlog volume is less all sale preparation,

roading, LTF costs while net utility revenue is less only haul costs. This was done for accounting purposes only.

Total Net Revenue - This is the sum of the net sawlog and net utility revenues. It represents the the financial return expected off an acre of forest land given the land characteristics, costs, values, and rotation age.

This analysis is done on a "per-acre" basis. All lands represented in this table may not be available for timber harvest in any one alternative. This simply provides information on the location and characteristics of high and low valued timber stands specific to the individual Management Area.

The information in Table B-12 is listed in order of the highest valued acres to the lowest. This is presented by each administrative area: Chatham, Ketchikan, and Stikine.

Table B-12.

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C14	Norm	Unroad	D	35.90	310.40	34.0	10.0	31.4	7.00	5.72	11143.36	3935.08	7208.28	9.5	2664.28	9872.56
C34	Norm	Unroad	D	35.90	310.40	34.0	10.0	33.2	7.00	0.00	11143.36	3993.98	7149.38	9.5	2647.09	9796.47
C31	Norm	Unroad	D	35.90	310.40	34.0	10.0	35.1	6.50	39.83	11143.36	3989.77	7153.59	9.5	2628.95	9782.54
C29	Norm	Unroad	D	35.90	310.40	34.0	10.0	33.2	7.00	42.27	11143.36	4036.25	7107.11	9.5	2647.09	9754.20
C57	Norm	Roaded	D	35.90	310.40	34.0	10.0	61.9	12.50	0.00	11143.36	4110.79	7032.58	9.5	2373.03	9405.60
C56	Norm	Unroad	D	35.90	310.40	34.0	10.0	61.9	12.50	0.00	11143.36	6259.06	4884.30	9.5	2373.03	7257.33
C57	Norm	Unroad	D	35.90	310.40	34.0	10.0	61.9	12.50	0.00	11143.36	6259.06	4884.30	9.5	2373.03	7257.33
C61	Norm	Unroad	D	35.90	310.40	34.0	10.0	61.9	12.50	0.00	11143.36	6259.06	4884.30	9.5	2373.03	7257.33
C21	Isol	Unroad	D	35.90	239.92	34.0	10.0	30.0	6.00	2.86	8613.13	3657.46	4955.67	9.5	2004.61	6960.28
C56	Diff	Unroad	D	35.90	292.78	34.0	10.0	61.9	12.50	0.00	10510.80	6259.06	4251.74	9.5	2204.77	6456.51
C21	Norm	Roaded	C	30.50	176.41	34.0	10.0	30.0	6.00	2.86	5380.51	2280.69	3099.82	8.1	1187.82	4287.64
C34	Norm	Roaded	C	30.50	176.41	34.0	10.0	33.2	7.00	0.00	5380.51	2428.07	2952.44	8.1	1161.86	4114.30
C48	Norm	Roaded	C	30.50	176.41	34.0	10.0	25.9	12.00	19.55	5380.51	2488.16	2892.35	8.1	1221.09	4113.44
C37	Norm	Roaded	C	30.50	176.41	34.0	10.0	33.2	7.00	13.76	5380.51	2441.83	2938.68	8.1	1161.86	4100.54
C06	Norm	Roaded	C	30.50	176.41	34.0	10.0	35.1	6.00	0.00	5380.51	2433.38	2947.13	8.1	1146.45	4093.58
C29	Norm	Roaded	C	30.50	176.41	34.0	10.0	33.2	7.00	42.27	5380.51	2470.34	2910.17	8.1	1161.86	4072.03
C28	Norm	Roaded	C	30.50	176.41	34.0	10.0	35.1	6.50	0.00	5380.51	2459.70	2920.81	8.1	1146.45	4067.26
C32	Norm	Roaded	C	30.50	176.41	34.0	10.0	35.1	6.50	0.00	5380.51	2459.70	2920.81	8.1	1146.45	4067.26
C30	Norm	Roaded	C	30.50	176.41	34.0	10.0	35.1	6.50	1.84	5380.51	2461.54	2918.97	8.1	1146.45	4065.42
C31	Norm	Roaded	C	30.50	176.41	34.0	10.0	35.1	6.50	39.83	5380.51	2499.53	2880.98	8.1	1146.45	4027.43
C21	Norm	Unroad	C	30.50	176.41	34.0	10.0	30.0	6.00	2.86	5380.51	3311.86	2068.65	8.1	1187.82	3256.47
C55	Norm	Roaded	C	30.50	176.41	34.0	10.0	61.9	5.00	0.00	5380.51	3198.14	2182.37	8.1	929.02	3111.38
C37	Diff	Roaded	C	30.50	150.54	34.0	10.0	33.2	7.00	13.76	4591.47	2441.83	2149.64	8.1	951.98	3101.62
C29	Diff	Roaded	C	30.50	150.54	34.0	10.0	33.2	7.00	42.27	4591.47	2470.34	2121.13	8.1	951.98	3073.11
C30	Diff	Roaded	C	30.50	150.54	34.0	10.0	35.1	6.50	1.84	4591.47	2461.54	2129.93	8.1	936.56	3066.50
C05	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.00	0.00	5380.51	3464.55	1915.96	8.1	1146.45	3062.40
C06	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.00	0.00	5380.51	3464.55	1915.96	8.1	1146.45	3062.40
C14	Norm	Unroad	C	30.50	176.41	34.0	10.0	31.4	7.00	5.72	5380.51	3581.92	1798.59	8.1	1176.47	2975.05
C13	Norm	Unroad	C	30.50	176.41	34.0	10.0	31.4	7.00	8.85	5380.51	3585.05	1795.46	8.1	1176.47	2971.92
C28	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.50	0.00	5380.51	3576.80	1803.71	8.1	1146.45	2950.15

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C32	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.50	0.00	5380.51	3576.80	1803.71	8.1	1146.45	2950.15
C30	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.50	1.84	5380.51	3578.64	1801.87	8.1	1146.45	2948.31
C27	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.50	17.22	5380.51	3594.02	1786.49	8.1	1146.45	2932.93
C39	Norm	Unroad	C	30.50	176.41	34.0	10.0	26.8	8.00	21.31	5380.51	3681.71	1698.80	8.1	1213.79	2912.58
C33	Norm	Unroad	C	30.50	176.41	34.0	10.0	33.2	7.00	0.00	5380.51	3631.10	1749.41	8.1	1161.86	2911.27
C34	Norm	Unroad	C	30.50	176.41	34.0	10.0	33.2	7.00	0.00	5380.51	3631.10	1749.41	8.1	1161.86	2911.27
C31	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	6.50	39.83	5380.51	3616.63	1763.88	8.1	1146.45	2910.32
C37	Norm	Unroad	C	30.50	176.41	34.0	10.0	33.2	7.00	13.76	5380.51	3644.86	1735.65	8.1	1161.86	2897.51
C43	Norm	Unroad	C	30.50	176.41	34.0	10.0	27.7	8.00	22.95	5380.51	3710.80	1669.71	8.1	1206.48	2876.19
C29	Norm	Unroad	C	30.50	176.41	34.0	10.0	33.2	7.00	42.27	5380.51	3673.37	1707.14	8.1	1161.86	2869.00
C03	Norm	Unroad	C	30.50	176.41	34.0	10.0	40.1	6.00	7.72	5380.51	3624.77	1755.74	8.1	1105.88	2861.62
C41	Norm	Unroad	C	30.50	176.41	34.0	10.0	27.7	8.00	50.03	5380.51	3737.88	1642.63	8.1	1206.48	2849.11
C20	Norm	Unroad	C	30.50	176.41	34.0	10.0	35.1	7.50	0.00	5380.51	3801.30	1579.21	8.1	1146.45	2725.65
C57	Norm	Roaded	C	30.50	176.41	34.0	10.0	61.9	12.50	0.00	5380.51	3592.93	1787.58	8.1	929.02	2716.60
C53	Norm	Roaded	C	30.50	176.41	34.0	10.0	61.9	15.50	0.00	5380.51	3750.84	1629.67	8.1	929.02	2558.69
C42	Norm	Unroad	C	30.50	176.41	34.0	10.0	36.9	8.00	0.00	5380.51	3968.45	1412.06	8.1	1131.84	2543.90
C18	Diff	Roaded	C	30.50	150.54	34.0	10.0	49.0	7.50	0.00	4591.47	2936.29	1655.19	8.1	823.79	2478.98
C19	Diff	Roaded	C	30.50	150.54	34.0	10.0	49.0	7.50	0.00	4591.47	2936.29	1655.19	8.1	823.79	2478.98
C21	Norm	Roaded	B	23.10	148.43	34.0	10.0	30.0	6.00	2.86	3428.73	1807.09	1621.65	6.1	727.70	2349.35
C43	Norm	Roaded	B	23.10	148.43	34.0	10.0	27.7	8.00	22.95	3428.73	1879.32	1549.41	6.1	741.84	2291.25
C41	Norm	Roaded	B	23.10	148.43	34.0	10.0	27.7	8.00	50.03	3428.73	1906.40	1522.33	6.1	741.84	2264.17
C21	Diff	Unroad	C	30.50	150.54	34.0	10.0	30.0	6.00	2.86	4591.47	3311.86	1279.61	8.1	977.94	2257.55
C02	Diff	Unroad	C	30.50	150.54	34.0	10.0	30.5	6.00	0.00	4591.47	3324.25	1267.22	8.1	973.88	2241.10
C34	Norm	Roaded	B	23.10	148.43	34.0	10.0	33.2	7.00	0.00	3428.73	1930.79	1497.95	6.1	708.04	2205.99
C06	Norm	Roaded	B	23.10	148.43	34.0	10.0	35.1	6.00	0.00	3428.73	1922.04	1506.70	6.1	696.37	2203.06
C37	Norm	Roaded	B	23.10	148.43	34.0	10.0	33.2	7.00	13.76	3428.73	1944.55	1484.19	6.1	708.04	2192.23
C17	Norm	Unroad	C	30.50	176.41	34.0	10.0	49.0	7.50	0.00	5380.51	4225.25	1155.26	8.1	1033.68	2188.93
C18	Norm	Unroad	C	30.50	176.41	34.0	10.0	49.0	7.50	0.00	5380.51	4225.25	1155.26	8.1	1033.68	2188.93
C19	Norm	Unroad	C	30.50	176.41	34.0	10.0	49.0	7.50	0.00	5380.51	4225.25	1155.26	8.1	1033.68	2188.93
C28	Norm	Roaded	B	23.10	148.43	34.0	10.0	35.1	6.50	0.00	3428.73	1948.36	1480.38	6.1	696.37	2176.74

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C32	Norm	Roaded	B	23.10	148.43	34.0	10.0	35.1	6.50	0.00	3428.73	1948.36	1480.38	6.1	696.37	2176.74
C30	Norm	Roaded	B	23.10	148.43	34.0	10.0	35.1	6.50	1.84	3428.73	1950.20	1478.54	6.1	696.37	2174.90
C29	Norm	Roaded	B	23.10	148.43	34.0	10.0	33.2	7.00	42.27	3428.73	1973.06	1455.68	6.1	708.04	2163.72
C27	Norm	Roaded	B	23.10	148.43	34.0	10.0	35.1	6.50	17.22	3428.73	1965.58	1463.16	6.1	696.37	2159.52
C44	Norm	Roaded	B	23.10	148.43	34.0	10.0	25.9	12.00	15.19	3428.73	2040.54	1388.20	6.1	752.90	2141.09
C40	Norm	Roaded	B	23.10	148.43	34.0	10.0	25.9	12.00	16.36	3428.73	2041.71	1387.03	6.1	752.90	2139.92
C31	Norm	Roaded	B	23.10	148.43	34.0	10.0	35.1	6.50	39.83	3428.73	1988.19	1440.55	6.1	696.37	2136.91
C48	Norm	Roaded	B	23.10	148.43	34.0	10.0	25.9	12.00	19.55	3428.73	2044.90	1383.84	6.1	752.90	2136.73
C46	Norm	Unroad	C	30.50	176.41	34.0	10.0	25.9	12.00	0.00	5380.51	4530.95	849.56	8.1	1221.09	2070.64
C06	Diff	Unroad	C	30.50	150.54	34.0	10.0	35.1	6.00	0.00	4591.47	3464.55	1126.92	8.1	936.56	2063.48
C44	Norm	Unroad	C	30.50	176.41	34.0	10.0	25.9	12.00	15.19	5380.51	4546.14	834.37	8.1	1221.09	2055.45
C40	Norm	Unroad	C	30.50	176.41	34.0	10.0	25.9	12.00	16.36	5380.51	4547.31	833.20	8.1	1221.09	2054.28
C48	Norm	Unroad	C	30.50	176.41	34.0	10.0	25.9	12.00	19.55	5380.51	4550.50	830.01	8.1	1221.09	2051.09
C03	Norm	Roaded	B	23.10	148.43	34.0	10.0	40.1	6.00	7.72	3428.73	2045.26	1383.48	6.1	665.64	2049.12
C15	Norm	Roaded	B	23.10	148.43	34.0	10.0	30.5	12.00	0.00	3428.73	2131.61	1297.13	6.1	724.63	2021.76
C12	Diff	Unroad	C	30.50	150.54	34.0	10.0	31.4	7.00	0.00	4591.47	3576.20	1015.27	8.1	966.58	1981.85
C14	Diff	Unroad	C	30.50	150.54	34.0	10.0	31.4	7.00	5.72	4591.47	3581.92	1009.55	8.1	966.58	1976.13
C13	Diff	Unroad	C	30.50	150.54	34.0	10.0	31.4	7.00	8.85	4591.47	3585.05	1006.42	8.1	966.58	1973.00
C28	Diff	Unroad	C	30.50	150.54	34.0	10.0	35.1	6.50	0.00	4591.47	3576.80	1014.67	8.1	936.56	1951.23
C30	Diff	Unroad	C	30.50	150.54	34.0	10.0	35.1	6.50	1.84	4591.47	3578.64	1012.83	8.1	936.56	1949.39
C31	Diff	Unroad	C	30.50	150.54	34.0	10.0	35.1	6.50	39.83	4591.47	3616.63	974.84	8.1	936.56	1911.40
C37	Diff	Unroad	C	30.50	150.54	34.0	10.0	33.2	7.00	13.76	4591.47	3644.86	946.61	8.1	951.98	1898.59
C01	Norm	Unroad	C	30.50	176.41	34.0	10.0	30.5	12.00	0.00	5380.51	4671.25	709.26	8.1	1183.77	1893.02
C15	Norm	Unroad	C	30.50	176.41	34.0	10.0	30.5	12.00	0.00	5380.51	4671.25	709.26	8.1	1183.77	1893.02
C10	Norm	Unroad	C	30.50	176.41	34.0	10.0	30.5	12.00	9.67	5380.51	4680.92	699.59	8.1	1183.77	1883.35
C29	Diff	Unroad	C	30.50	150.54	34.0	10.0	33.2	7.00	42.27	4591.47	3673.37	918.10	8.1	951.98	1870.08
C03	Diff	Unroad	C	30.50	150.54	34.0	10.0	40.1	6.00	7.72	4591.47	3624.77	966.70	8.1	896.00	1862.70
C19	Norm	Roaded	B	23.10	148.43	34.0	10.0	49.0	7.50	0.00	3428.73	2322.09	1106.65	6.1	610.96	1717.61
C21	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.0	6.00	2.86	3428.73	2838.26	590.47	6.1	727.70	1318.18
C02	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.5	6.00	0.00	3428.73	2846.95	581.78	6.1	724.63	1306.42

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C04	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	0.00	0.00	1846.17	951.70	894.47	3.9	372.63	1267.10
C43	Diff	Roaded	B	23.10	112.73	34.0	10.0	27.7	8.00	22.95	2604.06	1879.32	724.74	6.1	522.48	1247.21
C41	Diff	Roaded	B	23.10	112.73	34.0	10.0	27.7	8.00	50.03	2604.06	1906.40	697.66	6.1	522.48	1220.13
C18	Diff	Unroad	C	30.50	150.54	34.0	10.0	49.0	7.50	0.00	4591.47	4225.25	366.22	8.1	823.79	1190.01
C19	Diff	Unroad	C	30.50	150.54	34.0	10.0	49.0	7.50	0.00	4591.47	4225.25	366.22	8.1	823.79	1190.01
C05	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.00	0.00	3428.73	2953.21	475.52	6.1	696.37	1171.89
C06	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.00	0.00	3428.73	2953.21	475.52	6.1	696.37	1171.89
C07	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.00	0.00	3428.73	2953.21	475.52	6.1	696.37	1171.89
C34	Diff	Roaded	B	23.10	112.73	34.0	10.0	33.2	7.00	0.00	2604.06	1930.79	673.28	6.1	488.68	1161.96
C06	Diff	Roaded	B	23.10	112.73	34.0	10.0	35.1	6.00	0.00	2604.06	1922.04	682.03	6.1	477.01	1159.03
C37	Diff	Roaded	B	23.10	112.73	34.0	10.0	33.2	7.00	13.76	2604.06	1944.55	659.52	6.1	488.68	1148.20
C28	Diff	Roaded	B	23.10	112.73	34.0	10.0	35.1	6.50	0.00	2604.06	1948.36	655.71	6.1	477.01	1132.71
C32	Diff	Roaded	B	23.10	112.73	34.0	10.0	35.1	6.50	0.00	2604.06	1948.36	655.71	6.1	477.01	1132.71
C30	Diff	Roaded	B	23.10	112.73	34.0	10.0	35.1	6.50	1.84	2604.06	1950.20	653.87	6.1	477.01	1130.87
C29	Diff	Roaded	B	23.10	112.73	34.0	10.0	33.2	7.00	42.27	2604.06	1973.06	631.01	6.1	488.68	1119.69
C44	Diff	Roaded	B	23.10	112.73	34.0	10.0	25.9	12.00	15.19	2604.06	2040.54	563.53	6.1	533.54	1097.06
C40	Diff	Roaded	B	23.10	112.73	34.0	10.0	25.9	12.00	16.36	2604.06	2041.71	562.36	6.1	533.54	1095.89
C31	Diff	Roaded	B	23.10	112.73	34.0	10.0	35.1	6.50	39.83	2604.06	1988.19	615.88	6.1	477.01	1092.88
C48	Diff	Roaded	B	23.10	112.73	34.0	10.0	25.9	12.00	19.55	2604.06	2044.90	559.17	6.1	533.54	1092.70
C57	Norm	Roaded	B	23.10	148.43	34.0	10.0	61.9	12.50	0.00	3428.73	2883.27	545.47	6.1	531.69	1077.16
C28	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.50	0.00	3428.73	3065.46	363.27	6.1	696.37	1059.64
C32	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.50	0.00	3428.73	3065.46	363.27	6.1	696.37	1059.64
C30	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.50	1.84	3428.73	3067.30	361.43	6.1	696.37	1057.80
C14	Norm	Unroad	B	23.10	148.43	34.0	10.0	31.4	7.00	5.72	3428.73	3097.96	330.77	6.1	719.10	1049.88
C13	Norm	Unroad	B	23.10	148.43	34.0	10.0	31.4	7.00	8.85	3428.73	3101.09	327.64	6.1	719.10	1046.75
C27	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.50	17.22	3428.73	3082.68	346.05	6.1	696.37	1042.42
C31	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	6.50	39.83	3428.73	3105.29	323.44	6.1	696.37	1019.81
C03	Norm	Unroad	B	23.10	148.43	34.0	10.0	40.1	6.00	7.72	3428.73	3076.43	352.30	6.1	665.64	1017.95
C03	Diff	Roaded	B	23.10	112.73	34.0	10.0	40.1	6.00	7.72	2604.06	2045.26	558.81	6.1	446.28	1005.09
C33	Norm	Unroad	B	23.10	148.43	34.0	10.0	33.2	7.00	0.00	3428.73	3133.82	294.91	6.1	708.04	1002.96

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C34	Norm	Unroad	B	23.10	148.43	34.0	10.0	33.2	7.00	0.00	3428.73	3133.82	294.91	6.1	708.04	1002.96
C37	Norm	Unroad	B	23.10	148.43	34.0	10.0	33.2	7.00	13.76	3428.73	3147.58	281.15	6.1	708.04	989.20
C29	Norm	Unroad	B	23.10	148.43	34.0	10.0	33.2	7.00	42.27	3428.73	3176.09	252.64	6.1	708.04	960.69
C21	Norm	Roaded	A	14.60	126.45	34.0	10.0	30.0	6.00	2.86	1846.17	1263.09	583.08	3.9	374.57	957.66
C39	Norm	Unroad	B	23.10	148.43	34.0	10.0	26.8	8.00	21.31	3428.73	3231.79	196.94	6.1	747.37	944.31
C53	Norm	Roaded	B	23.10	148.43	34.0	10.0	61.9	15.50	0.00	3428.73	3041.18	387.55	6.1	531.69	919.25
C43	Norm	Unroad	B	23.10	148.43	34.0	10.0	27.7	8.00	22.95	3428.73	3254.22	174.51	6.1	741.84	916.35
C01	Diff	Unroad	C	30.50	150.54	34.0	10.0	30.5	12.00	0.00	4591.47	4671.25	-79.78	8.1	973.88	894.10
C15	Diff	Unroad	C	30.50	150.54	34.0	10.0	30.5	12.00	0.00	4591.47	4671.25	-79.78	8.1	973.88	894.10
C41	Norm	Unroad	B	23.10	148.43	34.0	10.0	27.7	8.00	50.03	3428.73	3281.30	147.43	6.1	741.84	889.27
C10	Diff	Unroad	C	30.50	150.54	34.0	10.0	30.5	12.00	9.67	4591.47	4680.92	-89.45	8.1	973.88	884.43
C43	Norm	Roaded	A	14.60	126.45	34.0	10.0	27.7	8.00	22.95	1846.17	1354.87	491.30	3.9	383.51	874.80
C06	Norm	Roaded	A	14.60	126.45	34.0	10.0	35.1	6.00	0.00	1846.17	1334.69	511.48	3.9	354.77	866.25
C33	Norm	Roaded	A	14.60	126.45	34.0	10.0	33.2	7.00	0.00	1846.17	1359.59	486.58	3.9	362.15	848.73
C34	Norm	Roaded	A	14.60	126.45	34.0	10.0	33.2	7.00	0.00	1846.17	1359.59	486.58	3.9	362.15	848.73
C41	Norm	Roaded	A	14.60	126.45	34.0	10.0	27.7	8.00	50.03	1846.17	1381.95	464.22	3.9	383.51	847.72
C28	Norm	Roaded	A	14.60	126.45	34.0	10.0	35.1	6.50	0.00	1846.17	1361.01	485.16	3.9	354.77	839.93
C32	Norm	Roaded	A	14.60	126.45	34.0	10.0	35.1	6.50	0.00	1846.17	1361.01	485.16	3.9	354.77	839.93
C30	Norm	Roaded	A	14.60	126.45	34.0	10.0	35.1	6.50	1.84	1846.17	1362.85	483.32	3.9	354.77	838.09
C20	Norm	Unroad	B	23.10	148.43	34.0	10.0	35.1	7.50	0.00	3428.73	3289.96	138.77	6.1	696.37	835.14
C37	Norm	Roaded	A	14.60	126.45	34.0	10.0	33.2	7.00	13.76	1846.17	1373.35	472.82	3.9	362.15	834.97
C27	Norm	Roaded	A	14.60	126.45	34.0	10.0	35.1	6.50	17.22	1846.17	1378.23	467.94	3.9	354.77	822.71
C29	Norm	Roaded	A	14.60	126.45	34.0	10.0	33.2	7.00	42.27	1846.17	1401.86	444.31	3.9	362.15	806.46
C31	Norm	Roaded	A	14.60	126.45	34.0	10.0	35.1	6.50	39.83	1846.17	1400.84	445.33	3.9	354.77	800.10
C03	Norm	Roaded	A	14.60	126.45	34.0	10.0	40.1	6.00	7.72	1846.17	1415.41	430.76	3.9	335.35	766.11
C46	Norm	Roaded	A	14.60	126.45	34.0	10.0	25.9	12.00	0.00	1846.17	1516.20	329.97	3.9	390.50	720.47
C45	Norm	Roaded	A	14.60	126.45	34.0	10.0	25.9	12.00	13.23	1846.17	1529.43	316.74	3.9	390.50	707.24
C44	Norm	Roaded	A	14.60	126.45	34.0	10.0	25.9	12.00	15.19	1846.17	1531.39	314.78	3.9	390.50	705.28
C40	Norm	Roaded	A	14.60	126.45	34.0	10.0	25.9	12.00	16.36	1846.17	1532.56	313.61	3.9	390.50	704.11
C48	Norm	Roaded	A	14.60	126.45	34.0	10.0	25.9	12.00	19.55	1846.17	1535.75	310.42	3.9	390.50	700.92

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C25	Norm	Roaded	A	14.60	126.45	34.0	10.0	31.4	10.00	25.57	1846.17	1516.79	329.38	3.9	369.14	698.52
C18	Diff	Roaded	B	23.10	112.73	34.0	10.0	49.0	7.50	0.00	2604.06	2322.09	281.98	6.1	391.60	673.57
C19	Diff	Roaded	B	23.10	112.73	34.0	10.0	49.0	7.50	0.00	2604.06	2322.09	281.98	6.1	391.60	673.57
C42	Norm	Unroad	B	23.10	148.43	34.0	10.0	36.9	8.00	0.00	3428.73	3443.79	-15.06	6.1	685.31	670.25
C10	Norm	Roaded	A	14.60	126.45	34.0	10.0	30.5	12.00	9.67	1846.17	1593.03	253.14	3.9	372.63	625.78
C56	Norm	Unroad	C	30.50	176.41	34.0	10.0	61.9	12.50	0.00	5380.51	5741.20	-360.69	8.1	929.02	568.32
C57	Norm	Unroad	C	30.50	176.41	34.0	10.0	61.9	12.50	0.00	5380.51	5741.20	-360.69	8.1	929.02	568.32
C61	Norm	Unroad	C	30.50	176.41	34.0	10.0	61.9	12.50	0.00	5380.51	5741.20	-360.69	8.1	929.02	568.32
C18	Norm	Roaded	A	14.60	126.45	34.0	10.0	49.0	7.50	0.00	1846.17	1616.59	229.59	3.9	300.78	530.37
C19	Norm	Roaded	A	14.60	126.45	34.0	10.0	49.0	7.50	0.00	1846.17	1616.59	229.59	3.9	300.78	530.37
C17	Norm	Unroad	B	23.10	148.43	34.0	10.0	49.0	7.50	0.00	3428.73	3611.05	-182.32	6.1	610.96	428.64
C18	Norm	Unroad	B	23.10	148.43	34.0	10.0	49.0	7.50	0.00	3428.73	3611.05	-182.32	6.1	610.96	428.64
C19	Norm	Unroad	B	23.10	148.43	34.0	10.0	49.0	7.50	0.00	3428.73	3611.05	-182.32	6.1	610.96	428.64
C55	Norm	Roaded	A	14.60	126.45	34.0	10.0	61.9	5.00	0.00	1846.17	1673.33	172.84	3.9	250.69	423.53
C25	Norm	Unroad	B	23.10	148.43	34.0	10.0	31.4	10.00	25.57	3428.73	3791.31	-362.58	6.1	719.10	356.53
C21	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.0	6.00	2.86	2604.06	2838.26	-234.20	6.1	508.34	274.15
C02	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.5	6.00	0.00	2604.06	2846.95	-242.89	6.1	505.27	262.38
C05	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.00	0.00	2604.06	2953.21	-349.15	6.1	477.01	127.86
C06	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.00	0.00	2604.06	2953.21	-349.15	6.1	477.01	127.86
C07	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.00	0.00	2604.06	2953.21	-349.15	6.1	477.01	127.86
C46	Norm	Unroad	B	23.10	148.43	34.0	10.0	25.9	12.00	0.00	3428.73	4087.69	-658.96	6.1	752.90	93.94
C50	Norm	Unroad	B	23.10	148.43	34.0	10.0	25.9	12.00	0.00	3428.73	4087.69	-658.96	6.1	752.90	93.94
C45	Norm	Unroad	B	23.10	148.43	34.0	10.0	25.9	12.00	13.23	3428.73	4100.92	-672.19	6.1	752.90	80.71
C44	Norm	Unroad	B	23.10	148.43	34.0	10.0	25.9	12.00	15.19	3428.73	4102.88	-674.15	6.1	752.90	78.75
C40	Norm	Unroad	B	23.10	148.43	34.0	10.0	25.9	12.00	16.36	3428.73	4104.05	-675.32	6.1	752.90	77.58
C48	Norm	Unroad	B	23.10	148.43	34.0	10.0	25.9	12.00	19.55	3428.73	4107.24	-678.51	6.1	752.90	74.39
C31	Isol	Roaded	C	30.50	72.94	34.0	10.0	35.1	6.50	39.83	2224.67	2499.53	-274.86	8.1	307.00	32.14
C56	Norm	Roaded	A	14.60	126.45	34.0	10.0	61.9	12.50	0.00	1846.17	2068.12	-221.94	3.9	250.69	28.74
C57	Norm	Roaded	A	14.60	126.45	34.0	10.0	61.9	12.50	0.00	1846.17	2068.12	-221.94	3.9	250.69	28.74
C28	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.50	0.00	2604.06	3065.46	-461.40	6.1	477.01	15.61

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C32	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.50	0.00	2604.06	3065.46	-461.40	6.1	477.01	15.61
C30	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.50	1.84	2604.06	3067.30	-463.24	6.1	477.01	13.77
C12	Diff	Unroad	B	23.10	112.73	34.0	10.0	31.4	7.00	0.00	2604.06	3092.24	-488.18	6.1	499.74	11.56
C14	Diff	Unroad	B	23.10	112.73	34.0	10.0	31.4	7.00	5.72	2604.06	3097.96	-493.90	6.1	499.74	5.84
C13	Diff	Unroad	B	23.10	112.73	34.0	10.0	31.4	7.00	8.85	2604.06	3101.09	-497.03	6.1	499.74	2.71
C27	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.50	17.22	2604.06	3082.68	-478.62	6.1	477.01	-1.61
C31	Diff	Unroad	B	23.10	112.73	34.0	10.0	35.1	6.50	39.83	2604.06	3105.29	-501.23	6.1	477.01	-24.22
C03	Diff	Unroad	B	23.10	112.73	34.0	10.0	40.1	6.00	7.72	2604.06	3076.43	-472.37	6.1	446.28	-26.08
C01	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.5	12.00	0.00	3428.73	4193.95	-765.22	6.1	724.63	-40.58
C08	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.5	12.00	0.00	3428.73	4193.95	-765.22	6.1	724.63	-40.58
C09	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.5	12.00	0.00	3428.73	4193.95	-765.22	6.1	724.63	-40.58
C15	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.5	12.00	0.00	3428.73	4193.95	-765.22	6.1	724.63	-40.58
C33	Diff	Unroad	B	23.10	112.73	34.0	10.0	33.2	7.00	0.00	2604.06	3133.82	-529.76	6.1	488.68	-41.08
C34	Diff	Unroad	B	23.10	112.73	34.0	10.0	33.2	7.00	0.00	2604.06	3133.82	-529.76	6.1	488.68	-41.08
C10	Norm	Unroad	B	23.10	148.43	34.0	10.0	30.5	12.00	9.67	3428.73	4203.62	-774.89	6.1	724.63	-50.25
C37	Diff	Unroad	B	23.10	112.73	34.0	10.0	33.2	7.00	13.76	2604.06	3147.58	-543.52	6.1	488.68	-54.84
C21	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.0	6.00	2.86	1846.17	2294.26	-448.09	3.9	374.57	-73.52
C02	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	6.00	0.00	1846.17	2298.70	-452.53	3.9	372.63	-79.90
C29	Diff	Unroad	B	23.10	112.73	34.0	10.0	33.2	7.00	42.27	2604.06	3176.09	-572.03	6.1	488.68	-83.35
C21	Diff	Roaded	A	14.60	70.03	34.0	10.0	30.0	6.00	2.86	1022.44	1263.09	-240.65	3.9	155.46	-85.19
C39	Diff	Unroad	B	23.10	112.73	34.0	10.0	26.8	8.00	21.31	2604.06	3231.79	-627.73	6.1	528.01	-99.72
C47	Diff	Unroad	B	23.10	112.73	34.0	10.0	27.7	8.00	0.00	2604.06	3231.27	-627.21	6.1	522.48	-104.73
C53	Norm	Unroad	C	30.50	176.41	34.0	10.0	61.9	15.50	0.00	5380.51	6414.70	-1034.20	8.1	929.02	-105.18
C43	Diff	Unroad	B	23.10	112.73	34.0	10.0	27.7	8.00	22.95	2604.06	3254.22	-650.16	6.1	522.48	-127.68
C53	Norm	Roaded	A	14.60	126.45	34.0	10.0	61.9	15.50	0.00	1846.17	2226.03	-379.86	3.9	250.69	-129.17
C41	Diff	Unroad	B	23.10	112.73	34.0	10.0	27.7	8.00	50.03	2604.06	3281.30	-677.24	6.1	522.48	-154.76
C05	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.00	0.00	1846.17	2365.86	-519.69	3.9	354.77	-164.92
C06	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.00	0.00	1846.17	2365.86	-519.69	3.9	354.77	-164.92
C07	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.00	0.00	1846.17	2365.86	-519.69	3.9	354.77	-164.92
C06	Diff	Roaded	A	14.60	70.03	34.0	10.0	35.1	6.00	0.00	1022.44	1334.69	-312.25	3.9	135.65	-176.60

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C41	Diff	Roaded	A	14.60	70.03	34.0	10.0	27.7	8.00	50.03	1022.44	1381.95	-359.52	3.9	164.39	-195.12
C32	Diff	Roaded	A	14.60	70.03	34.0	10.0	35.1	6.50	0.00	1022.44	1361.01	-338.57	3.9	135.65	-202.91
C30	Diff	Roaded	A	14.60	70.03	34.0	10.0	35.1	6.50	1.84	1022.44	1362.85	-340.41	3.9	135.65	-204.75
C37	Diff	Roaded	A	14.60	70.03	34.0	10.0	33.2	7.00	13.76	1022.44	1373.35	-350.91	3.9	143.03	-207.88
C29	Diff	Roaded	A	14.60	70.03	34.0	10.0	33.2	7.00	42.27	1022.44	1401.86	-379.42	3.9	143.03	-236.39
C31	Diff	Roaded	A	14.60	70.03	34.0	10.0	35.1	6.50	39.83	1022.44	1400.84	-378.40	3.9	135.65	-242.74
C03	Norm	Unroad	A	14.60	126.45	34.0	10.0	40.1	6.00	7.72	1846.17	2446.58	-600.41	3.9	335.35	-265.06
C28	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.50	0.00	1846.17	2478.11	-631.94	3.9	354.77	-277.17
C32	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.50	0.00	1846.17	2478.11	-631.94	3.9	354.77	-277.17
C30	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.50	1.84	1846.17	2479.95	-633.78	3.9	354.77	-279.01
C27	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.50	17.22	1846.17	2495.33	-649.16	3.9	354.77	-294.39
C31	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	6.50	39.83	1846.17	2517.94	-671.77	3.9	354.77	-317.00
C46	Diff	Roaded	A	14.60	70.03	34.0	10.0	25.9	12.00	0.00	1022.44	1516.20	-493.76	3.9	171.38	-322.37
C14	Norm	Unroad	A	14.60	126.45	34.0	10.0	31.4	7.00	5.72	1846.17	2542.06	-695.89	3.9	369.14	-326.75
C13	Norm	Unroad	A	14.60	126.45	34.0	10.0	31.4	7.00	8.85	1846.17	2545.19	-699.02	3.9	369.14	-329.88
C44	Diff	Roaded	A	14.60	70.03	34.0	10.0	25.9	12.00	15.19	1022.44	1531.39	-508.95	3.9	171.38	-337.56
C40	Diff	Roaded	A	14.60	70.03	34.0	10.0	25.9	12.00	16.36	1022.44	1532.56	-510.12	3.9	171.38	-338.73
C48	Diff	Roaded	A	14.60	70.03	34.0	10.0	25.9	12.00	19.55	1022.44	1535.75	-513.31	3.9	171.38	-341.92
C33	Norm	Unroad	A	14.60	126.45	34.0	10.0	33.2	7.00	0.00	1846.17	2562.62	-716.45	3.9	362.15	-354.30
C34	Norm	Unroad	A	14.60	126.45	34.0	10.0	33.2	7.00	0.00	1846.17	2562.62	-716.45	3.9	362.15	-354.30
C37	Norm	Unroad	A	14.60	126.45	34.0	10.0	33.2	7.00	13.76	1846.17	2576.38	-730.21	3.9	362.15	-368.06
C42	Diff	Unroad	B	23.10	112.73	34.0	10.0	36.9	8.00	0.00	2604.06	3443.79	-839.73	6.1	465.95	-373.78
C29	Norm	Unroad	A	14.60	126.45	34.0	10.0	33.2	7.00	42.27	1846.17	2604.89	-758.72	3.9	362.15	-396.57
C56	Diff	Unroad	C	30.50	150.54	34.0	10.0	61.9	12.50	0.00	4591.47	5741.20	-1149.73	8.1	719.14	-430.59
C55	Norm	Unroad	A	14.60	126.45	34.0	10.0	61.9	5.00	0.00	1846.17	2532.64	-686.47	3.9	250.69	-435.78
C39	Norm	Unroad	A	14.60	126.45	34.0	10.0	26.8	8.00	21.31	1846.17	2714.99	-868.82	3.9	387.00	-481.82
C43	Norm	Unroad	A	14.60	126.45	34.0	10.0	27.7	8.00	22.95	1846.17	2729.77	-883.60	3.9	383.51	-500.09
C20	Norm	Unroad	A	14.60	126.45	34.0	10.0	35.1	7.50	0.00	1846.17	2702.61	-856.44	3.9	354.77	-501.67
C18	Diff	Roaded	A	14.60	70.03	34.0	10.0	49.0	7.50	0.00	1022.44	1616.59	-594.15	3.9	81.67	-512.47
C19	Diff	Roaded	A	14.60	70.03	34.0	10.0	49.0	7.50	0.00	1022.44	1616.59	-594.15	3.9	81.67	-512.47

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C41	Norm	Unroad	A	14.60	126.45	34.0	10.0	27.7	8.00	50.03	1846.17	2756.85	-910.68	3.9	383.51	-527.17
C60	Norm	Unroad	C	30.50	176.41	34.0	10.0	92.4	12.50	0.00	5380.51	6671.45	-1290.95	8.1	681.57	-609.37
C17	Diff	Unroad	B	23.10	112.73	34.0	10.0	49.0	7.50	0.00	2604.06	3611.05	-1006.99	6.1	391.60	-615.39
C18	Diff	Unroad	B	23.10	112.73	34.0	10.0	49.0	7.50	0.00	2604.06	3611.05	-1006.99	6.1	391.60	-615.39
C19	Diff	Unroad	B	23.10	112.73	34.0	10.0	49.0	7.50	0.00	2604.06	3611.05	-1006.99	6.1	391.60	-615.39
C42	Norm	Unroad	A	14.60	126.45	34.0	10.0	36.9	8.00	0.00	1846.17	2841.14	-994.97	3.9	347.78	-647.19
C21	Isol	Unroad	C	30.50	72.94	34.0	10.0	30.0	6.00	2.86	2224.67	3311.86	-1087.19	8.1	348.37	-738.82
C24	Diff	Unroad	B	23.10	112.73	34.0	10.0	31.4	10.00	76.92	2604.06	3842.66	-1238.60	6.1	499.74	-738.86
C02	Isol	Unroad	C	30.50	72.94	34.0	10.0	30.5	6.00	0.00	2224.67	3324.25	-1099.58	8.1	344.32	-755.26
C17	Norm	Unroad	A	14.60	126.45	34.0	10.0	49.0	7.50	0.00	1846.17	2905.55	-1059.38	3.9	300.78	-758.60
C18	Norm	Unroad	A	14.60	126.45	34.0	10.0	49.0	7.50	0.00	1846.17	2905.55	-1059.38	3.9	300.78	-758.60
C19	Norm	Unroad	A	14.60	126.45	34.0	10.0	49.0	7.50	0.00	1846.17	2905.55	-1059.38	3.9	300.78	-758.60
C46	Diff	Unroad	B	23.10	112.73	34.0	10.0	25.9	12.00	0.00	2604.06	4087.69	-1483.63	6.1	533.54	-950.09
C50	Diff	Unroad	B	23.10	112.73	34.0	10.0	25.9	12.00	0.00	2604.06	4087.69	-1483.63	6.1	533.54	-950.09
C44	Diff	Unroad	B	23.10	112.73	34.0	10.0	25.9	12.00	15.19	2604.06	4102.88	-1498.82	6.1	533.54	-965.28
C40	Diff	Unroad	B	23.10	112.73	34.0	10.0	25.9	12.00	16.36	2604.06	4104.05	-1499.99	6.1	533.54	-966.45
C48	Diff	Unroad	B	23.10	112.73	34.0	10.0	25.9	12.00	19.55	2604.06	4107.24	-1503.18	6.1	533.54	-969.64
C25	Norm	Unroad	A	14.60	126.45	34.0	10.0	31.4	10.00	25.57	1846.17	3235.41	-1389.24	3.9	369.14	-1020.10
C14	Isol	Unroad	C	30.50	72.94	34.0	10.0	31.4	7.00	5.72	2224.67	3581.92	-1357.25	8.1	337.01	-1020.24
C28	Isol	Unroad	C	30.50	72.94	34.0	10.0	35.1	6.50	0.00	2224.67	3576.80	-1352.13	8.1	307.00	-1045.13
C56	Norm	Unroad	B	23.10	148.43	34.0	10.0	61.9	12.50	0.00	3428.73	5031.54	-1602.81	6.1	531.69	-1071.11
C57	Norm	Unroad	B	23.10	148.43	34.0	10.0	61.9	12.50	0.00	3428.73	5031.54	-1602.81	6.1	531.69	-1071.11
C61	Norm	Unroad	B	23.10	148.43	34.0	10.0	61.9	12.50	0.00	3428.73	5031.54	-1602.81	6.1	531.69	-1071.11
C01	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.5	12.00	0.00	2604.06	4193.95	-1589.89	6.1	505.27	-1084.62
C04	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.5	12.00	0.00	2604.06	4193.95	-1589.89	6.1	505.27	-1084.62
C09	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.5	12.00	0.00	2604.06	4193.95	-1589.89	6.1	505.27	-1084.62
C15	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.5	12.00	0.00	2604.06	4193.95	-1589.89	6.1	505.27	-1084.62
C31	Isol	Unroad	C	30.50	72.94	34.0	10.0	35.1	6.50	39.83	2224.67	3616.63	-1391.96	8.1	307.00	-1084.96
C10	Diff	Unroad	B	23.10	112.73	34.0	10.0	30.5	12.00	9.67	2604.06	4203.62	-1599.56	6.1	505.27	-1094.29
C47	Isol	Unroad	C	30.50	72.94	34.0	10.0	27.7	8.00	0.00	2224.67	3687.85	-1463.18	8.1	367.03	-1096.15

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C53	Diff	Unroad	C	30.50	150.54	34.0	10.0	61.9	15.50	0.00	4591.47	6414.70	-1823.23	8.1	719.14	-1104.09
C21	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.0	6.00	2.86	1022.44	2294.26	-1271.82	3.9	155.46	-1116.36
C02	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	6.00	0.00	1022.44	2298.70	-1276.26	3.9	153.52	-1122.74
C05	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.00	0.00	1022.44	2365.86	-1343.42	3.9	135.65	-1207.77
C06	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.00	0.00	1022.44	2365.86	-1343.42	3.9	135.65	-1207.77
C07	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.00	0.00	1022.44	2365.86	-1343.42	3.9	135.65	-1207.77
C03	Diff	Unroad	A	14.60	70.03	34.0	10.0	40.1	6.00	7.72	1022.44	2446.58	-1424.14	3.9	116.24	-1307.91
C28	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.50	0.00	1022.44	2478.11	-1455.67	3.9	135.65	-1320.02
C32	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.50	0.00	1022.44	2478.11	-1455.67	3.9	135.65	-1320.02
C30	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.50	1.84	1022.44	2479.95	-1457.51	3.9	135.65	-1321.86
C27	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.50	17.22	1022.44	2495.33	-1472.89	3.9	135.65	-1337.24
C46	Norm	Unroad	A	14.60	126.45	34.0	10.0	25.9	12.00	0.00	1846.17	3578.54	-1732.37	3.9	390.50	-1341.87
C50	Norm	Unroad	A	14.60	126.45	34.0	10.0	25.9	12.00	0.00	1846.17	3578.54	-1732.37	3.9	390.50	-1341.87
C45	Norm	Unroad	A	14.60	126.45	34.0	10.0	25.9	12.00	13.23	1846.17	3591.77	-1745.60	3.9	390.50	-1355.10
C44	Norm	Unroad	A	14.60	126.45	34.0	10.0	25.9	12.00	15.19	1846.17	3593.73	-1747.56	3.9	390.50	-1357.06
C40	Norm	Unroad	A	14.60	126.45	34.0	10.0	25.9	12.00	16.36	1846.17	3594.90	-1748.73	3.9	390.50	-1358.23
C31	Diff	Unroad	A	14.60	70.03	34.0	10.0	35.1	6.50	39.83	1022.44	2517.94	-1495.50	3.9	135.65	-1359.85
C48	Norm	Unroad	A	14.60	126.45	34.0	10.0	25.9	12.00	19.55	1846.17	3598.09	-1751.92	3.9	390.50	-1361.42
C12	Diff	Unroad	A	14.60	70.03	34.0	10.0	31.4	7.00	0.00	1022.44	2536.34	-1513.90	3.9	150.02	-1363.88
C14	Diff	Unroad	A	14.60	70.03	34.0	10.0	31.4	7.00	5.72	1022.44	2542.06	-1519.62	3.9	150.02	-1369.60
C13	Diff	Unroad	A	14.60	70.03	34.0	10.0	31.4	7.00	8.85	1022.44	2545.19	-1522.75	3.9	150.02	-1372.73
C33	Diff	Unroad	A	14.60	70.03	34.0	10.0	33.2	7.00	0.00	1022.44	2562.62	-1540.18	3.9	143.03	-1397.15
C34	Diff	Unroad	A	14.60	70.03	34.0	10.0	33.2	7.00	0.00	1022.44	2562.62	-1540.18	3.9	143.03	-1397.15
C37	Diff	Unroad	A	14.60	70.03	34.0	10.0	33.2	7.00	13.76	1022.44	2576.38	-1553.94	3.9	143.03	-1410.91
C01	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	12.00	0.00	1846.17	3645.70	-1799.53	3.9	372.63	-1426.90
C08	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	12.00	0.00	1846.17	3645.70	-1799.53	3.9	372.63	-1426.90
C09	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	12.00	0.00	1846.17	3645.70	-1799.53	3.9	372.63	-1426.90
C15	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	12.00	0.00	1846.17	3645.70	-1799.53	3.9	372.63	-1426.90
C10	Norm	Unroad	A	14.60	126.45	34.0	10.0	30.5	12.00	9.67	1846.17	3655.37	-1809.20	3.9	372.63	-1436.57
C29	Diff	Unroad	A	14.60	70.03	34.0	10.0	33.2	7.00	42.27	1022.44	2604.89	-1582.45	3.9	143.03	-1439.42

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C47	Diff	Unroad	A	14.60	70.03	34.0	10.0	27.7	8.00	0.00	1022.44	2706.82	-1684.38	3.9	164.39	-1519.99
C39	Diff	Unroad	A	14.60	70.03	34.0	10.0	26.8	8.00	21.31	1022.44	2714.99	-1692.55	3.9	167.89	-1524.66
C43	Diff	Unroad	A	14.60	70.03	34.0	10.0	27.7	8.00	22.95	1022.44	2729.77	-1707.33	3.9	164.39	-1542.94
C41	Diff	Unroad	A	14.60	70.03	34.0	10.0	27.7	8.00	50.03	1022.44	2756.85	-1734.41	3.9	164.39	-1570.02
C42	Diff	Unroad	A	14.60	70.03	34.0	10.0	36.9	8.00	0.00	1022.44	2841.14	-1818.70	3.9	128.66	-1690.04
C53	Norm	Unroad	B	23.10	148.43	34.0	10.0	61.9	15.50	0.00	3428.73	5705.04	-2276.31	6.1	531.69	-1744.61
C54	Norm	Unroad	B	23.10	148.43	34.0	10.0	61.9	15.50	0.00	3428.73	5705.04	-2276.31	6.1	531.69	-1744.61
C17	Diff	Unroad	A	14.60	70.03	34.0	10.0	49.0	7.50	0.00	1022.44	2905.55	-1883.11	3.9	81.67	-1801.44
C18	Diff	Unroad	A	14.60	70.03	34.0	10.0	49.0	7.50	0.00	1022.44	2905.55	-1883.11	3.9	81.67	-1801.44
C19	Diff	Unroad	A	14.60	70.03	34.0	10.0	49.0	7.50	0.00	1022.44	2905.55	-1883.11	3.9	81.67	-1801.44
C18	Isol	Unroad	C	30.50	72.94	34.0	10.0	49.0	7.50	0.00	2224.67	4225.25	-2000.58	8.1	194.23	-1806.35
C59	Norm	Unroad	B	23.10	148.43	34.0	10.0	92.4	12.50	0.00	3428.73	5736.09	-2307.36	6.1	344.28	-1963.08
C31	Isol	Roaded	B	23.10	5.63	34.0	10.0	35.1	6.50	39.83	130.05	1988.19	-1858.13	6.1	-181.08	-2039.22
C25	Diff	Unroad	A	14.60	70.03	34.0	10.0	31.4	10.00	25.57	1022.44	3235.41	-2212.97	3.9	150.02	-2062.95
C01	Isol	Unroad	C	30.50	72.94	34.0	10.0	30.5	12.00	0.00	2224.67	4671.25	-2446.58	8.1	344.32	-2102.26
C09	Isol	Unroad	C	30.50	72.94	34.0	10.0	30.5	12.00	0.00	2224.67	4671.25	-2446.58	8.1	344.32	-2102.26
C10	Isol	Unroad	C	30.50	72.94	34.0	10.0	30.5	12.00	9.67	2224.67	4680.92	-2456.25	8.1	344.32	-2111.93
C24	Diff	Unroad	A	14.60	70.03	34.0	10.0	31.4	10.00	76.92	1022.44	3286.76	-2264.32	3.9	150.02	-2114.30
C56	Norm	Unroad	A	14.60	126.45	34.0	10.0	61.9	12.50	0.00	1846.17	4216.39	-2370.22	3.9	250.69	-2119.53
C57	Norm	Unroad	A	14.60	126.45	34.0	10.0	61.9	12.50	0.00	1846.17	4216.39	-2370.22	3.9	250.69	-2119.53
C61	Norm	Unroad	A	14.60	126.45	34.0	10.0	61.9	12.50	0.00	1846.17	4216.39	-2370.22	3.9	250.69	-2119.53
C51	Diff	Unroad	C	30.50	150.54	34.0	10.0	92.4	15.50	0.00	4591.47	7344.95	-2753.48	8.1	471.69	-2281.79
C46	Diff	Unroad	A	14.60	70.03	34.0	10.0	25.9	12.00	0.00	1022.44	3578.54	-2556.10	3.9	171.38	-2384.72
C50	Diff	Unroad	A	14.60	70.03	34.0	10.0	25.9	12.00	0.00	1022.44	3578.54	-2556.10	3.9	171.38	-2384.72
C45	Diff	Unroad	A	14.60	70.03	34.0	10.0	25.9	12.00	13.23	1022.44	3591.77	-2569.33	3.9	171.38	-2397.95
C44	Diff	Unroad	A	14.60	70.03	34.0	10.0	25.9	12.00	15.19	1022.44	3593.73	-2571.29	3.9	171.38	-2399.91
C40	Diff	Unroad	A	14.60	70.03	34.0	10.0	25.9	12.00	16.36	1022.44	3594.90	-2572.46	3.9	171.38	-2401.08
C48	Diff	Unroad	A	14.60	70.03	34.0	10.0	25.9	12.00	19.55	1022.44	3598.09	-2575.65	3.9	171.38	-2404.27
C01	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	12.00	0.00	1022.44	3645.70	-2623.26	3.9	153.52	-2469.74
C04	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	12.00	0.00	1022.44	3645.70	-2623.26	3.9	153.52	-2469.74

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C08	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	12.00	0.00	1022.44	3645.70	-2623.26	3.9	153.52	-2469.74
C09	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	12.00	0.00	1022.44	3645.70	-2623.26	3.9	153.52	-2469.74
C15	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	12.00	0.00	1022.44	3645.70	-2623.26	3.9	153.52	-2469.74
C10	Diff	Unroad	A	14.60	70.03	34.0	10.0	30.5	12.00	9.67	1022.44	3655.37	-2632.93	3.9	153.52	-2479.41
C51	Norm	Unroad	B	23.10	148.43	34.0	10.0	92.4	15.50	0.00	3428.73	6409.59	-2980.86	6.1	344.28	-2636.58
C59	Norm	Unroad	A	14.60	126.45	34.0	10.0	92.4	12.50	0.00	1846.17	4661.69	-2815.52	3.9	132.24	-2683.28
C53	Diff	Unroad	B	23.10	112.73	34.0	10.0	61.9	15.50	0.00	2604.06	5705.04	-3100.98	6.1	312.33	-2788.65
C53	Norm	Unroad	A	14.60	126.45	34.0	10.0	61.9	15.50	0.00	1846.17	4889.89	-3043.72	3.9	250.69	-2793.03
C54	Norm	Unroad	A	14.60	126.45	34.0	10.0	61.9	15.50	0.00	1846.17	4889.89	-3043.72	3.9	250.69	-2793.03
C21	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.0	6.00	2.86	130.05	2838.26	-2708.21	6.1	-149.74	-2857.95
C02	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.5	6.00	0.00	130.05	2846.95	-2716.90	6.1	-152.82	-2869.71
C04	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	0.00	0.00	-1448.76	951.70	-2400.46	3.9	-503.82	-2904.28
C05	Isol	Unroad	B	23.10	5.63	34.0	10.0	35.1	6.00	0.00	130.05	2953.21	-2823.16	6.1	-181.08	-3004.24
C06	Isol	Unroad	B	23.10	5.63	34.0	10.0	35.1	6.00	0.00	130.05	2953.21	-2823.16	6.1	-181.08	-3004.24
C07	Isol	Unroad	B	23.10	5.63	34.0	10.0	35.1	6.00	0.00	130.05	2953.21	-2823.16	6.1	-181.08	-3004.24
C28	Isol	Unroad	B	23.10	5.63	34.0	10.0	35.1	6.50	0.00	130.05	3065.46	-2935.41	6.1	-181.08	-3116.49
C14	Isol	Unroad	B	23.10	5.63	34.0	10.0	31.4	7.00	5.72	130.05	3097.96	-2967.91	6.1	-158.35	-3126.25
C13	Isol	Unroad	B	23.10	5.63	34.0	10.0	31.4	7.00	8.85	130.05	3101.09	-2971.04	6.1	-158.35	-3129.38
C31	Isol	Unroad	B	23.10	5.63	34.0	10.0	35.1	6.50	39.83	130.05	3105.29	-2975.24	6.1	-181.08	-3156.32
C56	Diff	Unroad	A	14.60	70.03	34.0	10.0	61.9	12.50	0.00	1022.44	4216.39	-3193.95	3.9	31.57	-3162.38
C37	Isol	Unroad	B	23.10	5.63	34.0	10.0	33.2	7.00	13.76	130.05	3147.58	-3017.53	6.1	-169.41	-3186.93
C39	Isol	Unroad	B	23.10	5.63	34.0	10.0	26.8	8.00	21.31	130.05	3231.79	-3101.74	6.1	-130.08	-3231.82
C47	Isol	Unroad	B	23.10	5.63	34.0	10.0	27.7	8.00	0.00	130.05	3231.27	-3101.22	6.1	-135.61	-3236.83
C43	Isol	Unroad	B	23.10	5.63	34.0	10.0	27.7	8.00	22.95	130.05	3254.22	-3124.17	6.1	-135.61	-3259.78
C51	Norm	Unroad	A	14.60	126.45	34.0	10.0	92.4	15.50	0.00	1846.17	5335.19	-3489.02	3.9	132.24	-3356.78
C31	Isol	Roaded	A	14.60	-99.23	34.0	10.0	35.1	6.50	39.83	-1448.76	1400.84	-2849.60	3.9	-521.68	-3371.28
C56	Isol	Unroad	C	30.50	72.94	34.0	10.0	61.9	12.50	0.00	2224.67	5741.20	-3516.53	8.1	89.57	-3426.96
C50	Isol	Roaded	A	14.60	-99.23	34.0	10.0	25.9	12.00	0.00	-1448.76	1516.20	-2964.95	3.9	-485.95	-3450.91
C51	Diff	Unroad	B	23.10	112.73	34.0	10.0	92.4	15.50	0.00	2604.06	6409.59	-3805.53	6.1	124.92	-3680.61
C17	Isol	Unroad	B	23.10	5.63	34.0	10.0	49.0	7.50	0.00	130.05	3611.05	-3481.00	6.1	-266.49	-3747.49

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C18	Isol	Unroad	B	23.10	5.63	34.0	10.0	49.0	7.50	0.00	130.05	3611.05	-3481.00	6.1	-266.49	-3747.49
C19	Isol	Unroad	B	23.10	5.63	34.0	10.0	49.0	7.50	0.00	130.05	3611.05	-3481.00	6.1	-266.49	-3747.49
C53	Diff	Unroad	A	14.60	70.03	34.0	10.0	61.9	15.50	0.00	1022.44	4889.89	-3867.45	3.9	31.57	-3835.88
C50	Isol	Unroad	B	23.10	5.63	34.0	10.0	25.9	12.00	0.00	130.05	4087.69	-3957.64	6.1	-124.55	-4082.19
C48	Isol	Unroad	B	23.10	5.63	34.0	10.0	25.9	12.00	19.55	130.05	4107.24	-3977.19	6.1	-124.55	-4101.74
C01	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.5	12.00	0.00	130.05	4193.95	-4063.90	6.1	-152.82	-4216.71
C08	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.5	12.00	0.00	130.05	4193.95	-4063.90	6.1	-152.82	-4216.71
C09	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.5	12.00	0.00	130.05	4193.95	-4063.90	6.1	-152.82	-4216.71
C15	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.5	12.00	0.00	130.05	4193.95	-4063.90	6.1	-152.82	-4216.71
C10	Isol	Unroad	B	23.10	5.63	34.0	10.0	30.5	12.00	9.67	130.05	4203.62	-4073.57	6.1	-152.82	-4226.38
C21	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.0	6.00	2.86	-1448.76	2294.26	-3743.02	3.9	-501.88	-4244.90
C02	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	6.00	0.00	-1448.76	2298.70	-3747.46	3.9	-503.82	-4251.28
C05	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.00	0.00	-1448.76	2365.86	-3814.62	3.9	-521.68	-4336.30
C06	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.00	0.00	-1448.76	2365.86	-3814.62	3.9	-521.68	-4336.30
C07	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.00	0.00	-1448.76	2365.86	-3814.62	3.9	-521.68	-4336.30
C51	Diff	Unroad	A	14.60	70.03	34.0	10.0	92.4	15.50	0.00	1022.44	5335.19	-4312.75	3.9	-86.88	-4399.63
C03	Isol	Unroad	A	14.60	-99.23	34.0	10.0	40.1	6.00	7.72	-1448.76	2446.58	-3895.34	3.9	-541.10	-4436.44
C28	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.50	0.00	-1448.76	2478.11	-3926.87	3.9	-521.68	-4448.55
C32	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.50	0.00	-1448.76	2478.11	-3926.87	3.9	-521.68	-4448.55
C30	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.50	1.84	-1448.76	2479.95	-3928.71	3.9	-521.68	-4450.39
C31	Isol	Unroad	A	14.60	-99.23	34.0	10.0	35.1	6.50	39.83	-1448.76	2517.94	-3966.70	3.9	-521.68	-4488.38
C14	Isol	Unroad	A	14.60	-99.23	34.0	10.0	31.4	7.00	5.72	-1448.76	2542.06	-3990.82	3.9	-507.31	-4498.13
C13	Isol	Unroad	A	14.60	-99.23	34.0	10.0	31.4	7.00	8.85	-1448.76	2545.19	-3993.95	3.9	-507.31	-4501.26
C33	Isol	Unroad	A	14.60	-99.23	34.0	10.0	33.2	7.00	0.00	-1448.76	2562.62	-4011.38	3.9	-514.31	-4525.68
C34	Isol	Unroad	A	14.60	-99.23	34.0	10.0	33.2	7.00	0.00	-1448.76	2562.62	-4011.38	3.9	-514.31	-4525.68
C37	Isol	Unroad	A	14.60	-99.23	34.0	10.0	33.2	7.00	13.76	-1448.76	2576.38	-4025.14	3.9	-514.31	-4539.44
C47	Isol	Unroad	A	14.60	-99.23	34.0	10.0	27.7	8.00	0.00	-1448.76	2706.82	-4155.58	3.9	-492.95	-4648.52
C39	Isol	Unroad	A	14.60	-99.23	34.0	10.0	26.8	8.00	21.31	-1448.76	2714.99	-4163.75	3.9	-489.45	-4653.20
C43	Isol	Unroad	A	14.60	-99.23	34.0	10.0	27.7	8.00	22.95	-1448.76	2729.77	-4178.53	3.9	-492.95	-4671.47
C17	Isol	Unroad	A	14.60	-99.23	34.0	10.0	49.0	7.50	0.00	-1448.76	2905.55	-4354.31	3.9	-575.67	-4929.97

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Chatham Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
C18	Isol	Unroad	A	14.60	-99.23	34.0	10.0	49.0	7.50	0.00	-1448.76	2905.55	-4354.31	3.9	-575.67	-4929.97
C19	Isol	Unroad	A	14.60	-99.23	34.0	10.0	49.0	7.50	0.00	-1448.76	2905.55	-4354.31	3.9	-575.67	-4929.97
C25	Isol	Unroad	A	14.60	-99.23	34.0	10.0	31.4	10.00	25.57	-1448.76	3235.41	-4684.17	3.9	-507.31	-5191.48
C46	Isol	Unroad	A	14.60	-99.23	34.0	10.0	25.9	12.00	0.00	-1448.76	3578.54	-5027.30	3.9	-485.95	-5513.25
C50	Isol	Unroad	A	14.60	-99.23	34.0	10.0	25.9	12.00	0.00	-1448.76	3578.54	-5027.30	3.9	-485.95	-5513.25
C44	Isol	Unroad	A	14.60	-99.23	34.0	10.0	25.9	12.00	15.19	-1448.76	3593.73	-5042.49	3.9	-485.95	-5528.44
C40	Isol	Unroad	A	14.60	-99.23	34.0	10.0	25.9	12.00	16.36	-1448.76	3594.90	-5043.66	3.9	-485.95	-5529.61
C48	Isol	Unroad	A	14.60	-99.23	34.0	10.0	25.9	12.00	19.55	-1448.76	3598.09	-5046.85	3.9	-485.95	-5532.80
C01	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	12.00	0.00	-1448.76	3645.70	-5094.46	3.9	-503.82	-5598.28
C08	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	12.00	0.00	-1448.76	3645.70	-5094.46	3.9	-503.82	-5598.28
C09	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	12.00	0.00	-1448.76	3645.70	-5094.46	3.9	-503.82	-5598.28
C15	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	12.00	0.00	-1448.76	3645.70	-5094.46	3.9	-503.82	-5598.28
C10	Isol	Unroad	A	14.60	-99.23	34.0	10.0	30.5	12.00	9.67	-1448.76	3655.37	-5104.13	3.9	-503.82	-5607.95
C51	Isol	Unroad	B	23.10	5.63	34.0	10.0	92.4	15.50	0.00	130.05	6409.59	-6279.54	6.1	-533.17	-6812.70
C51	Isol	Unroad	A	14.60	-99.23	34.0	10.0	92.4	15.50	0.00	-1448.76	5335.19	-6783.95	3.9	-744.21	-7528.16

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K24	Norm	Roaded	D	36.90	298.74	34.0	10.0	21.2	8.5	2.89	11023.51	2497.19	8526.31	5.0	1392.81	9919.12
K18	Norm	Roaded	D	36.90	298.74	34.0	10.0	24.0	6.5	7.02	11023.51	2499.37	8524.14	5.0	1378.76	9902.89
K17	Norm	Roaded	D	36.90	298.74	34.0	10.0	24.9	6.0	1.84	11023.51	2501.08	8522.43	5.0	1374.24	9896.67
K05	Norm	Roaded	D	36.90	298.74	34.0	10.0	33.2	7.5	4.49	11023.51	2888.96	8134.55	5.0	1332.59	9467.14
K11	Norm	Roaded	D	36.90	298.74	34.0	10.0	33.2	7.5	5.86	11023.51	2890.33	8133.18	5.0	1332.59	9465.77
K01	Norm	Roaded	D	36.90	298.74	34.0	10.0	36.0	6.0	0.00	11023.51	2908.83	8114.68	5.0	1318.53	9433.21
K09	Norm	Roaded	D	36.90	298.74	34.0	10.0	36.0	6.0	0.00	11023.51	2908.83	8114.68	5.0	1318.53	9433.21
K08	Norm	Roaded	D	36.90	298.74	34.0	10.0	36.0	6.0	0.92	11023.51	2909.75	8113.76	5.0	1318.53	9432.29
K07	Norm	Roaded	D	36.90	298.74	34.0	10.0	36.0	6.0	2.52	11023.51	2911.35	8112.16	5.0	1318.53	9430.69
K10	Norm	Roaded	D	36.90	298.74	34.0	10.0	36.0	6.0	5.23	11023.51	2914.06	8109.45	5.0	1318.53	9427.98
K04	Norm	Roaded	D	36.90	298.74	34.0	10.0	33.2	7.5	44.70	11023.51	2929.17	8094.34	5.0	1332.59	9426.93
K14	Norm	Roaded	D	36.90	298.74	34.0	10.0	35.1	7.5	0.00	11023.51	2954.58	8068.93	5.0	1323.05	9391.98
K03	Norm	Roaded	D	36.90	298.74	34.0	10.0	35.1	7.5	3.99	11023.51	2958.57	8064.94	5.0	1323.05	9387.99
K44	Norm	Roaded	D	36.90	298.74	34.0	10.0	40.6	7.5	0.00	11023.51	3157.53	7865.98	5.0	1295.45	9161.43
K21	Norm	Unroad	D	36.90	298.74	34.0	10.0	24.9	6.0	16.04	11023.51	3666.45	7357.06	5.0	1374.24	8731.29
K22	Diff	Roaded	D	36.90	275.60	34.0	10.0	24.9	9.5	21.66	10169.64	2705.13	7464.51	5.0	1258.11	8722.62
K18	Norm	Unroad	D	36.90	298.74	34.0	10.0	24.0	6.5	7.02	11023.51	3746.47	7277.04	5.0	1378.76	8655.79
K01	Diff	Roaded	D	36.90	275.60	34.0	10.0	36.0	6.0	0.00	10169.64	2908.83	7260.81	5.0	1202.41	8463.22
K08	Diff	Roaded	D	36.90	275.60	34.0	10.0	36.0	6.0	0.92	10169.64	2909.75	7259.89	5.0	1202.41	8462.30
K07	Diff	Roaded	D	36.90	275.60	34.0	10.0	36.0	6.0	2.52	10169.64	2911.35	7258.29	5.0	1202.41	8460.70
K03	Diff	Roaded	D	36.90	275.60	34.0	10.0	35.1	7.5	3.99	10169.64	2958.57	7211.08	5.0	1206.93	8418.00
K24	Norm	Unroad	D	36.90	298.74	34.0	10.0	21.2	8.5	2.89	11023.51	4128.02	6895.49	5.0	1392.81	8288.29
K01	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	6.0	0.00	11023.51	4060.00	6963.51	5.0	1318.53	8282.04
K06	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	6.0	0.00	11023.51	4060.00	6963.51	5.0	1318.53	8282.04
K09	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	6.0	0.00	11023.51	4060.00	6963.51	5.0	1318.53	8282.04
K08	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	6.0	0.92	11023.51	4060.92	6962.59	5.0	1318.53	8281.12
K07	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	6.0	2.52	11023.51	4062.52	6960.99	5.0	1318.53	8279.52
K25	Norm	Unroad	D	36.90	298.74	34.0	10.0	21.2	8.5	13.22	11023.51	4138.35	6885.16	5.0	1392.81	8277.96
K28	Norm	Unroad	D	36.90	298.74	34.0	10.0	21.2	8.5	14.24	11023.51	4139.37	6884.14	5.0	1392.81	8276.94
K10	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	6.0	5.23	11023.51	4065.23	6958.28	5.0	1318.53	8276.81

Table B-12. (continued)
Value Of Existing Timber -- Even-aged Mgt.
Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K26	Norm	Unroad	D	36.90	298.74	34.0	10.0	21.2	8.5	22.28	11023.51	4147.41	6876.10	5.0	1392.81	8268.90
K19	Norm	Unroad	D	36.90	298.74	34.0	10.0	21.2	8.5	31.75	11023.51	4156.88	6866.63	5.0	1392.81	8259.43
K05	Norm	Unroad	D	36.90	298.74	34.0	10.0	33.2	7.5	4.49	11023.51	4327.92	6695.59	5.0	1332.59	8028.17
K11	Norm	Unroad	D	36.90	298.74	34.0	10.0	33.2	7.5	5.86	11023.51	4329.29	6694.22	5.0	1332.59	8026.80
K04	Norm	Unroad	D	36.90	298.74	34.0	10.0	33.2	7.5	44.70	11023.51	4368.13	6655.38	5.0	1332.59	7987.96
K14	Norm	Unroad	D	36.90	298.74	34.0	10.0	35.1	7.5	0.00	11023.51	4393.54	6629.97	5.0	1323.05	7953.02
K03	Norm	Unroad	D	36.90	298.74	34.0	10.0	35.1	7.5	3.99	11023.51	4397.53	6625.98	5.0	1323.05	7949.03
K15	Norm	Unroad	D	36.90	298.74	34.0	10.0	36.0	7.5	0.00	11023.51	4426.75	6596.76	5.0	1318.53	7915.29
K22	Norm	Unroad	D	36.90	298.74	34.0	10.0	24.9	9.5	21.66	11023.51	4527.82	6495.69	5.0	1374.24	7869.92
K21	Diff	Unroad	D	36.90	275.60	34.0	10.0	24.9	6.0	16.04	10169.64	3666.45	6503.19	5.0	1258.11	7761.30
K18	Diff	Unroad	D	36.90	275.60	34.0	10.0	24.0	6.5	7.02	10169.64	3746.47	6423.17	5.0	1262.63	7685.80
K29	Norm	Unroad	D	36.90	298.74	34.0	10.0	32.3	10.0	4.12	11023.51	4905.59	6117.92	5.0	1337.10	7455.02
K30	Norm	Unroad	D	36.90	298.74	34.0	10.0	32.3	10.0	7.73	11023.51	4909.20	6114.31	5.0	1337.10	7451.41
K31	Diff	Unroad	D	36.90	275.60	34.0	10.0	21.2	8.0	7.28	10169.64	4010.16	6159.48	5.0	1276.68	7436.16
K24	Diff	Unroad	D	36.90	275.60	34.0	10.0	21.2	8.5	2.89	10169.64	4128.02	6041.62	5.0	1276.68	7318.30
K09	Diff	Unroad	D	36.90	275.60	34.0	10.0	36.0	6.0	0.00	10169.64	4060.00	6109.64	5.0	1202.41	7312.05
K08	Diff	Unroad	D	36.90	275.60	34.0	10.0	36.0	6.0	0.92	10169.64	4060.92	6108.72	5.0	1202.41	7311.13
K28	Diff	Unroad	D	36.90	275.60	34.0	10.0	21.2	8.5	14.24	10169.64	4139.37	6030.27	5.0	1276.68	7306.95
K26	Diff	Unroad	D	36.90	275.60	34.0	10.0	21.2	8.5	22.28	10169.64	4147.41	6022.23	5.0	1276.68	7298.91
K39	Norm	Unroad	D	36.90	298.74	34.0	10.0	26.8	12.5	0.00	11023.51	5309.77	5713.74	5.0	1364.70	7078.44
K32	Norm	Unroad	D	36.90	298.74	34.0	10.0	26.8	12.5	8.95	11023.51	5318.72	5704.79	5.0	1364.70	7069.49
K15	Diff	Unroad	D	36.90	275.60	34.0	10.0	36.0	7.5	0.00	10169.64	4426.75	5742.89	5.0	1202.41	6945.30
K22	Diff	Unroad	D	36.90	275.60	34.0	10.0	24.9	9.5	21.66	10169.64	4527.82	5641.82	5.0	1258.11	6899.93
K44	Diff	Unroad	D	36.90	275.60	34.0	10.0	40.6	7.5	0.00	10169.64	4596.49	5573.15	5.0	1179.32	6752.47
K17	Norm	Roaded	C	26.90	175.22	34.0	10.0	24.9	6.0	1.84	4713.42	1912.08	2801.34	3.7	549.93	3351.27
K18	Norm	Roaded	C	26.90	175.22	34.0	10.0	24.0	6.5	7.02	4713.42	1919.37	2794.05	3.7	553.22	3347.27
K21	Norm	Roaded	C	26.90	175.22	34.0	10.0	24.9	6.0	16.04	4713.42	1926.28	2787.14	3.7	549.93	3337.07
K24	Norm	Roaded	C	26.90	175.22	34.0	10.0	21.2	8.5	2.89	4713.42	1945.19	2768.23	3.7	563.47	3331.69
K20	Norm	Roaded	C	26.90	175.22	34.0	10.0	24.9	9.5	3.92	4713.42	2098.39	2615.03	3.7	549.93	3164.96
K22	Norm	Roaded	C	26.90	175.22	34.0	10.0	24.9	9.5	21.66	4713.42	2116.13	2597.29	3.7	549.93	3147.22

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K05	Norm	Roaded	C	26.90	175.22	34.0	10.0	33.2	7.5	4.49	4713.42	2216.96	2496.46	3.7	519.57	3016.03
K11	Norm	Roaded	C	26.90	175.22	34.0	10.0	33.2	7.5	5.86	4713.42	2218.33	2495.09	3.7	519.57	3014.66
K01	Norm	Roaded	C	26.90	175.22	34.0	10.0	36.0	6.0	0.00	4713.42	2208.83	2504.59	3.7	509.32	3013.91
K09	Norm	Roaded	C	26.90	175.22	34.0	10.0	36.0	6.0	0.00	4713.42	2208.83	2504.59	3.7	509.32	3013.91
K08	Norm	Roaded	C	26.90	175.22	34.0	10.0	36.0	6.0	0.92	4713.42	2209.75	2503.67	3.7	509.32	3012.99
K07	Norm	Roaded	C	26.90	175.22	34.0	10.0	36.0	6.0	2.52	4713.42	2211.35	2502.07	3.7	509.32	3011.39
K10	Norm	Roaded	C	26.90	175.22	34.0	10.0	36.0	6.0	5.23	4713.42	2214.06	2499.36	3.7	509.32	3008.68
K04	Norm	Roaded	C	26.90	175.22	34.0	10.0	33.2	7.5	44.70	4713.42	2257.17	2456.25	3.7	519.57	2975.82
K14	Norm	Roaded	C	26.90	175.22	34.0	10.0	35.1	7.5	0.00	4713.42	2263.58	2449.84	3.7	512.62	2962.46
K03	Norm	Roaded	C	26.90	175.22	34.0	10.0	35.1	7.5	3.99	4713.42	2267.57	2445.85	3.7	512.62	2958.47
K34	Norm	Roaded	C	26.90	175.22	34.0	10.0	26.8	12.5	0.00	4713.42	2303.50	2409.92	3.7	542.98	2952.90
K39	Norm	Roaded	C	26.90	175.22	34.0	10.0	26.8	12.5	0.00	4713.42	2303.50	2409.92	3.7	542.98	2952.90
K32	Norm	Roaded	C	26.90	175.22	34.0	10.0	26.8	12.5	8.95	4713.42	2312.45	2400.97	3.7	542.98	2943.95
K35	Norm	Roaded	C	26.90	175.22	34.0	10.0	26.8	12.5	15.67	4713.42	2319.17	2394.25	3.7	542.98	2937.23
K15	Norm	Roaded	C	26.90	175.22	34.0	10.0	36.0	7.5	0.00	4713.42	2287.79	2425.63	3.7	509.32	2934.96
K17	Norm	Roaded	B	29.40	152.23	34.0	10.0	24.9	6.0	1.84	4475.56	2059.33	2416.23	4.0	509.12	2925.35
K18	Norm	Roaded	B	29.40	152.23	34.0	10.0	24.0	6.5	7.02	4475.56	2064.37	2411.20	4.0	512.71	2923.91
K24	Norm	Roaded	B	29.40	152.23	34.0	10.0	21.2	8.5	2.89	4475.56	2083.19	2392.37	4.0	523.91	2916.28
K21	Norm	Roaded	B	29.40	152.23	34.0	10.0	24.9	6.0	16.04	4475.56	2073.53	2402.03	4.0	509.12	2911.15
K28	Norm	Roaded	B	29.40	152.23	34.0	10.0	21.2	8.5	14.24	4475.56	2094.54	2381.02	4.0	523.91	2904.93
K44	Norm	Roaded	C	26.90	175.22	34.0	10.0	40.6	7.5	0.00	4713.42	2411.53	2301.89	3.7	492.49	2794.39
K20	Norm	Roaded	B	29.40	152.23	34.0	10.0	24.9	9.5	3.92	4475.56	2245.64	2229.92	4.0	509.12	2739.04
K22	Norm	Roaded	B	29.40	152.23	34.0	10.0	24.9	9.5	21.66	4475.56	2263.38	2212.18	4.0	509.12	2721.30
K05	Norm	Roaded	B	29.40	152.23	34.0	10.0	33.2	7.5	4.49	4475.56	2384.96	2090.61	4.0	475.93	2566.54
K11	Norm	Roaded	B	29.40	152.23	34.0	10.0	33.2	7.5	5.86	4475.56	2386.33	2089.24	4.0	475.93	2565.17
K01	Norm	Roaded	B	29.40	152.23	34.0	10.0	36.0	6.0	0.00	4475.56	2383.83	2091.73	4.0	464.73	2556.47
K09	Norm	Roaded	B	29.40	152.23	34.0	10.0	36.0	6.0	0.00	4475.56	2383.83	2091.73	4.0	464.73	2556.47
K08	Norm	Roaded	B	29.40	152.23	34.0	10.0	36.0	6.0	0.92	4475.56	2384.75	2090.81	4.0	464.73	2555.55
K07	Norm	Roaded	B	29.40	152.23	34.0	10.0	36.0	6.0	2.52	4475.56	2386.35	2089.21	4.0	464.73	2553.95
K10	Norm	Roaded	B	29.40	152.23	34.0	10.0	36.0	6.0	5.23	4475.56	2389.06	2086.50	4.0	464.73	2551.24

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K17	Diff	Roaded	C	26.90	148.46	34.0	10.0	24.9	6.0	1.84	3993.57	1912.08	2081.50	3.7	452.03	2533.53
K04	Norm	Roaded	B	29.40	152.23	34.0	10.0	33.2	7.5	44.70	4475.56	2425.17	2050.40	4.0	475.93	2526.33
K34	Norm	Roaded	B	29.40	152.23	34.0	10.0	26.8	12.5	0.00	4475.56	2455.50	2020.07	4.0	501.52	2521.59
K39	Norm	Roaded	B	29.40	152.23	34.0	10.0	26.8	12.5	0.00	4475.56	2455.50	2020.07	4.0	501.52	2521.59
K21	Diff	Roaded	C	26.90	148.46	34.0	10.0	24.9	6.0	16.04	3993.57	1926.28	2067.30	3.7	452.03	2519.33
K41	Norm	Roaded	B	29.40	152.23	34.0	10.0	26.8	12.5	4.08	4475.56	2459.58	2015.99	4.0	501.52	2517.51
K32	Norm	Roaded	B	29.40	152.23	34.0	10.0	26.8	12.5	8.95	4475.56	2464.45	2011.12	4.0	501.52	2512.64
K14	Norm	Roaded	B	29.40	152.23	34.0	10.0	35.1	7.5	0.00	4475.56	2436.33	2039.24	4.0	468.33	2507.57
K35	Norm	Roaded	B	29.40	152.23	34.0	10.0	26.8	12.5	15.67	4475.56	2471.17	2004.40	4.0	501.52	2505.92
K03	Norm	Roaded	B	29.40	152.23	34.0	10.0	35.1	7.5	3.99	4475.56	2440.32	2035.25	4.0	468.33	2503.58
K40	Norm	Roaded	B	29.40	152.23	34.0	10.0	26.8	12.5	36.48	4475.56	2491.98	1983.59	4.0	501.52	2485.11
K15	Norm	Roaded	B	29.40	152.23	34.0	10.0	36.0	7.5	0.00	4475.56	2462.79	2012.78	4.0	464.73	2477.51
K22	Diff	Roaded	C	26.90	148.46	34.0	10.0	24.9	9.5	21.66	3993.57	2116.13	1877.44	3.7	452.03	2329.47
K44	Norm	Roaded	B	29.40	152.23	34.0	10.0	40.6	7.5	0.00	4475.56	2598.03	1877.54	4.0	446.34	2323.88
K17	Norm	Unroad	C	26.90	175.22	34.0	10.0	24.9	6.0	1.84	4713.42	3063.25	1650.17	3.7	549.93	2200.10
K01	Diff	Roaded	C	26.90	148.46	34.0	10.0	36.0	6.0	0.00	3993.57	2208.83	1784.75	3.7	411.42	2196.17
K09	Diff	Roaded	C	26.90	148.46	34.0	10.0	36.0	6.0	0.00	3993.57	2208.83	1784.75	3.7	411.42	2196.17
K08	Diff	Roaded	C	26.90	148.46	34.0	10.0	36.0	6.0	0.92	3993.57	2209.75	1783.83	3.7	411.42	2195.25
K07	Diff	Roaded	C	26.90	148.46	34.0	10.0	36.0	6.0	2.52	3993.57	2211.35	1782.23	3.7	411.42	2193.65
K21	Norm	Unroad	C	26.90	175.22	34.0	10.0	24.9	6.0	16.04	4713.42	3077.45	1635.97	3.7	549.93	2185.90
K14	Diff	Roaded	C	26.90	148.46	34.0	10.0	35.1	7.5	0.00	3993.57	2263.58	1730.00	3.7	414.72	2144.72
K03	Diff	Roaded	C	26.90	148.46	34.0	10.0	35.1	7.5	3.99	3993.57	2267.57	1726.01	3.7	414.72	2140.73
K32	Diff	Roaded	C	26.90	148.46	34.0	10.0	26.8	12.5	8.95	3993.57	2312.45	1681.13	3.7	445.08	2126.21
K15	Diff	Roaded	C	26.90	148.46	34.0	10.0	36.0	7.5	0.00	3993.57	2287.79	1705.79	3.7	411.42	2117.21
K18	Norm	Unroad	C	26.90	175.22	34.0	10.0	24.0	6.5	7.02	4713.42	3166.47	1546.95	3.7	553.22	2100.17
K44	Diff	Roaded	C	26.90	148.46	34.0	10.0	40.6	7.5	0.00	3993.57	2411.53	1582.05	3.7	394.60	1976.64
K01	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	6.0	0.00	4713.42	3360.00	1353.42	3.7	509.32	1862.74
K06	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	6.0	0.00	4713.42	3360.00	1353.42	3.7	509.32	1862.74
K09	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	6.0	0.00	4713.42	3360.00	1353.42	3.7	509.32	1862.74
K08	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	6.0	0.92	4713.42	3360.92	1352.50	3.7	509.32	1861.82

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K07	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	6.0	2.52	4713.42	3362.52	1350.90	3.7	509.32	1860.22
K10	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	6.0	5.23	4713.42	3365.23	1348.19	3.7	509.32	1857.51
K17	Diff	Roaded	B	29.40	119.38	34.0	10.0	24.9	6.0	1.84	3509.77	2059.33	1450.44	4.0	377.77	1828.21
K18	Diff	Roaded	B	29.40	119.38	34.0	10.0	24.0	6.5	7.02	3509.77	2064.37	1445.41	4.0	381.37	1826.77
K31	Norm	Unroad	C	26.90	175.22	34.0	10.0	21.2	8.0	7.28	4713.42	3458.16	1255.26	3.7	563.47	1818.72
K21	Diff	Roaded	B	29.40	119.38	34.0	10.0	24.9	6.0	16.04	3509.77	2073.53	1436.24	4.0	377.77	1814.01
K17	Norm	Unroad	B	29.40	152.23	34.0	10.0	24.9	6.0	1.84	4475.56	3210.50	1265.06	4.0	509.12	1774.18
K21	Norm	Unroad	B	29.40	152.23	34.0	10.0	24.9	6.0	16.04	4475.56	3224.70	1250.86	4.0	509.12	1759.98
K24	Norm	Unroad	C	26.90	175.22	34.0	10.0	21.2	8.5	2.89	4713.42	3576.02	1137.40	3.7	563.47	1700.86
K25	Norm	Unroad	C	26.90	175.22	34.0	10.0	21.2	8.5	13.22	4713.42	3586.35	1127.07	3.7	563.47	1690.53
K28	Norm	Unroad	C	26.90	175.22	34.0	10.0	21.2	8.5	14.24	4713.42	3587.37	1126.05	3.7	563.47	1689.51
K26	Norm	Unroad	C	26.90	175.22	34.0	10.0	21.2	8.5	22.28	4713.42	3595.41	1118.01	3.7	563.47	1681.47
K18	Norm	Unroad	B	29.40	152.23	34.0	10.0	24.0	6.5	7.02	4475.56	3311.47	1164.09	4.0	512.71	1676.81
K19	Norm	Unroad	C	26.90	175.22	34.0	10.0	21.2	8.5	31.75	4713.42	3604.88	1108.54	3.7	563.47	1672.00
K22	Diff	Roaded	B	29.40	119.38	34.0	10.0	24.9	9.5	21.66	3509.77	2263.38	1246.39	4.0	377.77	1624.16
K05	Norm	Unroad	C	26.90	175.22	34.0	10.0	33.2	7.5	4.49	4713.42	3655.92	1057.50	3.7	519.57	1577.06
K11	Norm	Unroad	C	26.90	175.22	34.0	10.0	33.2	7.5	5.86	4713.42	3657.29	1056.13	3.7	519.57	1575.69
K04	Norm	Unroad	C	26.90	175.22	34.0	10.0	33.2	7.5	44.70	4713.42	3696.13	1017.29	3.7	519.57	1536.85
K14	Norm	Unroad	C	26.90	175.22	34.0	10.0	35.1	7.5	0.00	4713.42	3702.54	1010.88	3.7	512.62	1523.49
K03	Norm	Unroad	C	26.90	175.22	34.0	10.0	35.1	7.5	3.99	4713.42	3706.53	1006.89	3.7	512.62	1519.50
K15	Norm	Unroad	C	26.90	175.22	34.0	10.0	36.0	7.5	0.00	4713.42	3726.75	986.67	3.7	509.32	1495.99
K01	Diff	Roaded	B	29.40	119.38	34.0	10.0	36.0	6.0	0.00	3509.77	2383.83	1125.94	4.0	333.39	1459.33
K09	Diff	Roaded	B	29.40	119.38	34.0	10.0	36.0	6.0	0.00	3509.77	2383.83	1125.94	4.0	333.39	1459.33
K08	Diff	Roaded	B	29.40	119.38	34.0	10.0	36.0	6.0	0.92	3509.77	2384.75	1125.02	4.0	333.39	1458.41
K07	Diff	Roaded	B	29.40	119.38	34.0	10.0	36.0	6.0	2.52	3509.77	2386.35	1123.42	4.0	333.39	1456.81
K10	Diff	Roaded	B	29.40	119.38	34.0	10.0	36.0	6.0	5.23	3509.77	2389.06	1120.71	4.0	333.39	1454.10
K41	Diff	Roaded	B	29.40	119.38	34.0	10.0	26.8	12.5	4.08	3509.77	2459.58	1050.20	4.0	370.17	1420.37
K32	Diff	Roaded	B	29.40	119.38	34.0	10.0	26.8	12.5	8.95	3509.77	2464.45	1045.33	4.0	370.17	1415.50
K14	Diff	Roaded	B	29.40	119.38	34.0	10.0	35.1	7.5	0.00	3509.77	2436.33	1073.45	4.0	336.99	1410.43
K03	Diff	Roaded	B	29.40	119.38	34.0	10.0	35.1	7.5	3.99	3509.77	2440.32	1069.46	4.0	336.99	1406.44

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K01	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	6.0	0.00	4475.56	3535.00	940.56	4.0	464.73	1405.30
K06	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	6.0	0.00	4475.56	3535.00	940.56	4.0	464.73	1405.30
K09	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	6.0	0.00	4475.56	3535.00	940.56	4.0	464.73	1405.30
K08	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	6.0	0.92	4475.56	3535.92	939.64	4.0	464.73	1404.38
K31	Norm	Unroad	B	29.40	152.23	34.0	10.0	21.2	8.0	7.28	4475.56	3596.16	879.40	4.0	523.91	1403.31
K07	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	6.0	2.52	4475.56	3537.52	938.04	4.0	464.73	1402.78
K10	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	6.0	5.23	4475.56	3540.23	935.33	4.0	464.73	1400.07
K17	Diff	Unroad	C	26.90	148.46	34.0	10.0	24.9	6.0	1.84	3993.57	3063.25	930.32	3.7	452.03	1382.36
K15	Diff	Roaded	B	29.40	119.38	34.0	10.0	36.0	7.5	0.00	3509.77	2462.79	1046.99	4.0	333.39	1380.37
K21	Diff	Unroad	C	26.90	148.46	34.0	10.0	24.9	6.0	16.04	3993.57	3077.45	916.12	3.7	452.03	1368.16
K44	Norm	Unroad	C	26.90	175.22	34.0	10.0	40.6	7.5	0.00	4713.42	3850.49	862.93	3.7	492.49	1355.42
K20	Norm	Unroad	C	26.90	175.22	34.0	10.0	24.9	9.5	3.92	4713.42	3921.08	792.34	3.7	549.93	1342.27
K45	Norm	Unroad	C	26.90	175.22	34.0	10.0	40.6	7.5	17.09	4713.42	3867.58	845.84	3.7	492.49	1338.33
K22	Norm	Unroad	C	26.90	175.22	34.0	10.0	24.9	9.5	21.66	4713.42	3938.82	774.60	3.7	549.93	1324.53
K24	Norm	Unroad	B	29.40	152.23	34.0	10.0	21.2	8.5	2.89	4475.56	3714.02	761.54	4.0	523.91	1285.45
K18	Diff	Unroad	C	26.90	148.46	34.0	10.0	24.0	6.5	7.02	3993.57	3166.47	827.10	3.7	455.32	1282.43
K25	Norm	Unroad	B	29.40	152.23	34.0	10.0	21.2	8.5	13.22	4475.56	3724.35	751.21	4.0	523.91	1275.12
K28	Norm	Unroad	B	29.40	152.23	34.0	10.0	21.2	8.5	14.24	4475.56	3725.37	750.19	4.0	523.91	1274.10
K26	Norm	Unroad	B	29.40	152.23	34.0	10.0	21.2	8.5	22.28	4475.56	3733.41	742.15	4.0	523.91	1266.06
K19	Norm	Unroad	B	29.40	152.23	34.0	10.0	21.2	8.5	31.75	4475.56	3742.88	732.68	4.0	523.91	1256.59
K44	Diff	Roaded	B	29.40	119.38	34.0	10.0	40.6	7.5	0.00	3509.77	2598.03	911.75	4.0	314.99	1226.74
K05	Norm	Unroad	B	29.40	152.23	34.0	10.0	33.2	7.5	4.49	4475.56	3823.92	651.64	4.0	475.93	1127.57
K11	Norm	Unroad	B	29.40	152.23	34.0	10.0	33.2	7.5	5.86	4475.56	3825.29	650.27	4.0	475.93	1126.20
K04	Norm	Unroad	B	29.40	152.23	34.0	10.0	33.2	7.5	44.70	4475.56	3864.13	611.43	4.0	475.93	1087.36
K14	Norm	Unroad	B	29.40	152.23	34.0	10.0	35.1	7.5	0.00	4475.56	3875.29	600.27	4.0	468.33	1068.60
K03	Norm	Unroad	B	29.40	152.23	34.0	10.0	35.1	7.5	3.99	4475.56	3879.28	596.28	4.0	468.33	1064.61
K01	Diff	Unroad	C	26.90	148.46	34.0	10.0	36.0	6.0	0.00	3993.57	3360.00	633.57	3.7	411.42	1045.00
K09	Diff	Unroad	C	26.90	148.46	34.0	10.0	36.0	6.0	0.00	3993.57	3360.00	633.57	3.7	411.42	1045.00
K08	Diff	Unroad	C	26.90	148.46	34.0	10.0	36.0	6.0	0.92	3993.57	3360.92	632.65	3.7	411.42	1044.08
K07	Diff	Unroad	C	26.90	148.46	34.0	10.0	36.0	6.0	2.52	3993.57	3362.52	631.05	3.7	411.42	1042.48

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K15	Norm	Unroad	B	29.40	152.23	34.0	10.0	36.0	7.5	0.00	4475.56	3901.75	573.81	4.0	464.73	1038.55
K42	Diff	Roaded	B	29.40	119.38	34.0	10.0	34.2	15.5	11.31	3509.77	2842.28	667.49	4.0	340.58	1008.08
K31	Diff	Unroad	C	26.90	148.46	34.0	10.0	21.2	8.0	7.28	3993.57	3458.16	535.41	3.7	465.57	1000.98
K29	Norm	Unroad	C	26.90	175.22	34.0	10.0	32.3	10.0	4.12	4713.42	4242.59	470.83	3.7	522.86	993.69
K30	Norm	Unroad	C	26.90	175.22	34.0	10.0	32.3	10.0	7.73	4713.42	4246.20	467.22	3.7	522.86	990.08
K13	Norm	Unroad	B	29.40	152.23	34.0	10.0	19.4	10.0	24.31	4475.56	4049.27	426.29	4.0	531.11	957.40
K20	Norm	Unroad	B	29.40	152.23	34.0	10.0	24.9	9.5	3.92	4475.56	4068.33	407.23	4.0	509.12	916.35
K22	Norm	Unroad	B	29.40	152.23	34.0	10.0	24.9	9.5	21.66	4475.56	4086.07	389.49	4.0	509.12	898.61
K44	Norm	Unroad	B	29.40	152.23	34.0	10.0	40.6	7.5	0.00	4475.56	4036.99	438.57	4.0	446.34	884.91
K24	Diff	Unroad	C	26.90	148.46	34.0	10.0	21.2	8.5	2.89	3993.57	3576.02	417.55	3.7	465.57	883.12
K25	Diff	Unroad	C	26.90	148.46	34.0	10.0	21.2	8.5	13.22	3993.57	3586.35	407.22	3.7	465.57	872.79
K28	Diff	Unroad	C	26.90	148.46	34.0	10.0	21.2	8.5	14.24	3993.57	3587.37	406.20	3.7	465.57	871.77
K45	Norm	Unroad	B	29.40	152.23	34.0	10.0	40.6	7.5	17.09	4475.56	4054.08	421.48	4.0	446.34	867.82
K14	Diff	Unroad	C	26.90	148.46	34.0	10.0	35.1	7.5	0.00	3993.57	3702.54	291.03	3.7	414.72	705.75
K03	Diff	Unroad	C	26.90	148.46	34.0	10.0	35.1	7.5	3.99	3993.57	3706.53	287.04	3.7	414.72	701.76
K15	Diff	Unroad	C	26.90	148.46	34.0	10.0	36.0	7.5	0.00	3993.57	3726.75	266.82	3.7	411.42	678.25
K17	Diff	Unroad	B	29.40	119.38	34.0	10.0	24.9	6.0	1.84	3509.77	3210.50	299.27	4.0	377.77	677.04
K21	Diff	Unroad	B	29.40	119.38	34.0	10.0	24.9	6.0	16.04	3509.77	3224.70	285.07	4.0	377.77	662.84
K18	Diff	Unroad	B	29.40	119.38	34.0	10.0	24.0	6.5	7.02	3509.77	3311.47	198.30	4.0	381.37	579.67
K34	Norm	Unroad	C	26.90	175.22	34.0	10.0	26.8	12.5	0.00	4713.42	4701.77	11.65	3.7	542.98	554.63
K39	Norm	Unroad	C	26.90	175.22	34.0	10.0	26.8	12.5	0.00	4713.42	4701.77	11.65	3.7	542.98	554.63
K41	Norm	Unroad	C	26.90	175.22	34.0	10.0	26.8	12.5	4.08	4713.42	4705.85	7.57	3.7	542.98	550.55
K29	Norm	Unroad	B	29.40	152.23	34.0	10.0	32.3	10.0	4.12	4475.56	4408.34	67.22	4.0	479.53	546.75
K32	Norm	Unroad	C	26.90	175.22	34.0	10.0	26.8	12.5	8.95	4713.42	4710.72	2.70	3.7	542.98	545.68
K30	Norm	Unroad	B	29.40	152.23	34.0	10.0	32.3	10.0	7.73	4475.56	4411.95	63.61	4.0	479.53	543.14
K35	Norm	Unroad	C	26.90	175.22	34.0	10.0	26.8	12.5	15.67	4713.42	4717.44	-4.02	3.7	542.98	538.96
K44	Diff	Unroad	C	26.90	148.46	34.0	10.0	40.6	7.5	0.00	3993.57	3850.49	143.08	3.7	394.60	537.68
K23	Diff	Unroad	C	26.90	148.46	34.0	10.0	24.9	9.5	0.00	3993.57	3917.16	76.41	3.7	452.03	528.45
K45	Diff	Unroad	C	26.90	148.46	34.0	10.0	40.6	7.5	17.09	3993.57	3867.58	125.99	3.7	394.60	520.59
K40	Norm	Unroad	C	26.90	175.22	34.0	10.0	26.8	12.5	36.48	4713.42	4738.25	-24.83	3.7	542.98	518.15

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K22	Diff	Unroad	C	26.90	148.46	34.0	10.0	24.9	9.5	21.66	3993.57	3938.82	54.75	3.7	452.03	506.79
K17	Norm	Roaded	A	16.90	95.99	34.0	10.0	24.9	6.0	1.84	1622.23	1323.08	299.15	2.3	163.39	462.55
K21	Norm	Roaded	A	16.90	95.99	34.0	10.0	24.9	6.0	16.04	1622.23	1337.28	284.95	2.3	163.39	448.35
K18	Norm	Roaded	A	16.90	95.99	34.0	10.0	24.0	6.5	7.02	1622.23	1339.37	282.86	2.3	165.46	448.33
K24	Norm	Roaded	A	16.90	95.99	34.0	10.0	21.2	8.5	2.89	1622.23	1393.19	229.04	2.3	171.90	400.94
K01	Diff	Unroad	B	29.40	119.38	34.0	10.0	36.0	6.0	0.00	3509.77	3535.00	-25.23	4.0	333.39	308.16
K09	Diff	Unroad	B	29.40	119.38	34.0	10.0	36.0	6.0	0.00	3509.77	3535.00	-25.23	4.0	333.39	308.16
K08	Diff	Unroad	B	29.40	119.38	34.0	10.0	36.0	6.0	0.92	3509.77	3535.92	-26.15	4.0	333.39	307.24
K31	Diff	Unroad	B	29.40	119.38	34.0	10.0	21.2	8.0	7.28	3509.77	3596.16	-86.39	4.0	392.56	306.17
K07	Diff	Unroad	B	29.40	119.38	34.0	10.0	36.0	6.0	2.52	3509.77	3537.52	-27.75	4.0	333.39	305.64
K10	Diff	Unroad	B	29.40	119.38	34.0	10.0	36.0	6.0	5.23	3509.77	3540.23	-30.46	4.0	333.39	302.93
K20	Norm	Roaded	A	16.90	95.99	34.0	10.0	24.9	9.5	3.92	1622.23	1509.39	112.84	2.3	163.39	276.23
K22	Norm	Roaded	A	16.90	95.99	34.0	10.0	24.9	9.5	21.66	1622.23	1527.13	95.10	2.3	163.39	258.49
K01	Norm	Roaded	A	16.90	95.99	34.0	10.0	36.0	6.0	0.00	1622.23	1508.83	113.40	2.3	137.88	251.28
K09	Norm	Roaded	A	16.90	95.99	34.0	10.0	36.0	6.0	0.00	1622.23	1508.83	113.40	2.3	137.88	251.28
K08	Norm	Roaded	A	16.90	95.99	34.0	10.0	36.0	6.0	0.92	1622.23	1509.75	112.48	2.3	137.88	250.36
K07	Norm	Roaded	A	16.90	95.99	34.0	10.0	36.0	6.0	2.52	1622.23	1511.35	110.88	2.3	137.88	248.76
K10	Norm	Roaded	A	16.90	95.99	34.0	10.0	36.0	6.0	5.23	1622.23	1514.06	108.17	2.3	137.88	246.05
K05	Norm	Roaded	A	16.90	95.99	34.0	10.0	33.2	7.5	4.49	1622.23	1544.96	77.28	2.3	144.32	221.59
K11	Norm	Roaded	A	16.90	95.99	34.0	10.0	33.2	7.5	5.86	1622.23	1546.33	75.91	2.3	144.32	220.22
K14	Norm	Roaded	A	16.90	95.99	34.0	10.0	35.1	7.5	0.00	1622.23	1572.58	49.66	2.3	139.95	189.61
K24	Diff	Unroad	B	29.40	119.38	34.0	10.0	21.2	8.5	2.89	3509.77	3714.02	-204.25	4.0	392.56	188.31
K03	Norm	Roaded	A	16.90	95.99	34.0	10.0	35.1	7.5	3.99	1622.23	1576.57	45.67	2.3	139.95	185.62
K04	Norm	Roaded	A	16.90	95.99	34.0	10.0	33.2	7.5	44.70	1622.23	1585.17	37.07	2.3	144.32	181.38
K25	Diff	Unroad	B	29.40	119.38	34.0	10.0	21.2	8.5	13.22	3509.77	3724.35	-214.58	4.0	392.56	177.98
K28	Diff	Unroad	B	29.40	119.38	34.0	10.0	21.2	8.5	14.24	3509.77	3725.37	-215.60	4.0	392.56	176.96
K29	Diff	Unroad	C	26.90	148.46	34.0	10.0	32.3	10.0	4.12	3993.57	4242.59	-249.02	3.7	424.96	175.94
K30	Diff	Unroad	C	26.90	148.46	34.0	10.0	32.3	10.0	7.73	3993.57	4246.20	-252.63	3.7	424.96	172.33
K15	Norm	Roaded	A	16.90	95.99	34.0	10.0	36.0	7.5	0.00	1622.23	1587.79	34.45	2.3	137.88	172.33
K26	Diff	Unroad	B	29.40	119.38	34.0	10.0	21.2	8.5	22.28	3509.77	3733.41	-223.64	4.0	392.56	168.92

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K19	Diff	Unroad	B	29.40	119.38	34.0	10.0	21.2	8.5	31.75	3509.77	3742.88	-233.11	4.0	392.56	159.45
K34	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	0.00	4475.56	4853.77	-378.21	4.0	501.52	123.31
K37	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	0.00	4475.56	4853.77	-378.21	4.0	501.52	123.31
K39	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	0.00	4475.56	4853.77	-378.21	4.0	501.52	123.31
K41	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	4.08	4475.56	4857.85	-382.29	4.0	501.52	119.23
K32	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	8.95	4475.56	4862.72	-387.16	4.0	501.52	114.36
K35	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	15.67	4475.56	4869.44	-393.88	4.0	501.52	107.64
K30	Norm	Roaded	A	16.90	95.99	34.0	10.0	32.3	10.0	7.73	1622.23	1664.58	-42.35	2.3	146.39	104.04
K40	Norm	Unroad	B	29.40	152.23	34.0	10.0	26.8	12.5	36.48	4475.56	4890.25	-414.69	4.0	501.52	86.83
K37	Norm	Roaded	A	16.90	95.99	34.0	10.0	26.8	12.5	0.00	1622.23	1695.50	-73.26	2.3	159.03	85.76
K39	Norm	Roaded	A	16.90	95.99	34.0	10.0	26.8	12.5	0.00	1622.23	1695.50	-73.26	2.3	159.03	85.76
K44	Norm	Roaded	A	16.90	95.99	34.0	10.0	40.6	7.5	0.00	1622.23	1665.53	-43.29	2.3	127.31	84.01
K32	Norm	Roaded	A	16.90	95.99	34.0	10.0	26.8	12.5	8.95	1622.23	1704.45	-82.21	2.3	159.03	76.81
K35	Norm	Roaded	A	16.90	95.99	34.0	10.0	26.8	12.5	15.67	1622.23	1711.17	-88.93	2.3	159.03	70.09
K40	Norm	Roaded	A	16.90	95.99	34.0	10.0	26.8	12.5	36.48	1622.23	1731.98	-109.74	2.3	159.03	49.28
K11	Diff	Unroad	B	29.40	119.38	34.0	10.0	33.2	7.5	5.86	3509.77	3825.29	-315.52	4.0	344.58	29.06
K04	Diff	Unroad	B	29.40	119.38	34.0	10.0	33.2	7.5	44.70	3509.77	3864.13	-354.36	4.0	344.58	-9.78
K14	Diff	Unroad	B	29.40	119.38	34.0	10.0	35.1	7.5	0.00	3509.77	3875.29	-365.52	4.0	336.99	-28.53
K03	Diff	Unroad	B	29.40	119.38	34.0	10.0	35.1	7.5	3.99	3509.77	3879.28	-369.51	4.0	336.99	-32.52
K15	Diff	Unroad	B	29.40	119.38	34.0	10.0	36.0	7.5	0.00	3509.77	3901.75	-391.98	4.0	333.39	-58.59
K23	Diff	Unroad	B	29.40	119.38	34.0	10.0	24.9	9.5	0.00	3509.77	4064.41	-554.64	4.0	377.77	-176.87
K20	Diff	Unroad	B	29.40	119.38	34.0	10.0	24.9	9.5	3.92	3509.77	4068.33	-558.56	4.0	377.77	-180.79
K22	Diff	Unroad	B	29.40	119.38	34.0	10.0	24.9	9.5	21.66	3509.77	4086.07	-576.30	4.0	377.77	-198.53
K44	Diff	Unroad	B	29.40	119.38	34.0	10.0	40.6	7.5	0.00	3509.77	4036.99	-527.22	4.0	314.99	-212.22
K45	Diff	Unroad	B	29.40	119.38	34.0	10.0	40.6	7.5	17.09	3509.77	4054.08	-544.31	4.0	314.99	-229.31
K34	Diff	Unroad	C	26.90	148.46	34.0	10.0	26.8	12.5	0.00	3993.57	4701.77	-708.20	3.7	445.08	-263.12
K39	Diff	Unroad	C	26.90	148.46	34.0	10.0	26.8	12.5	0.00	3993.57	4701.77	-708.20	3.7	445.08	-263.12
K41	Diff	Unroad	C	26.90	148.46	34.0	10.0	26.8	12.5	4.08	3993.57	4705.85	-712.28	3.7	445.08	-267.20
K32	Diff	Unroad	C	26.90	148.46	34.0	10.0	26.8	12.5	8.95	3993.57	4710.72	-717.15	3.7	445.08	-272.07
K35	Diff	Unroad	C	26.90	148.46	34.0	10.0	26.8	12.5	15.67	3993.57	4717.44	-723.87	3.7	445.08	-278.79

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K42	Norm	Unroad	C	26.90	175.22	34.0	10.0	34.2	15.5	11.31	4713.42	5645.64	-932.22	3.7	515.91	-416.31
K29	Diff	Unroad	B	29.40	119.38	34.0	10.0	32.3	10.0	4.12	3509.77	4408.34	-898.57	4.0	348.18	-550.39
K30	Diff	Unroad	B	29.40	119.38	34.0	10.0	32.3	10.0	7.73	3509.77	4411.95	-902.18	4.0	348.18	-554.00
K17	Norm	Unroad	A	16.90	95.99	34.0	10.0	24.9	6.0	1.84	1622.23	2474.25	-852.02	2.3	163.39	-688.63
K21	Norm	Unroad	A	16.90	95.99	34.0	10.0	24.9	6.0	16.04	1622.23	2488.45	-866.22	2.3	163.39	-702.83
K18	Norm	Unroad	A	16.90	95.99	34.0	10.0	24.0	6.5	7.02	1622.23	2586.47	-964.24	2.3	165.46	-798.78
K17	Diff	Roaded	A	16.90	29.73	34.0	10.0	24.9	6.0	1.84	502.44	1323.08	-820.64	2.3	11.10	-809.54
K21	Diff	Roaded	A	16.90	29.73	34.0	10.0	24.9	6.0	16.04	502.44	1337.28	-834.84	2.3	11.10	-823.74
K42	Norm	Unroad	B	29.40	152.23	34.0	10.0	34.2	15.5	11.31	4475.56	5816.14	-1340.58	4.0	471.93	-868.65
K24	Diff	Roaded	A	16.90	29.73	34.0	10.0	21.2	8.5	2.89	502.44	1393.19	-890.76	2.3	19.61	-871.15
K01	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	6.0	0.00	1622.23	2660.00	-1037.77	2.3	137.88	-899.89
K06	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	6.0	0.00	1622.23	2660.00	-1037.77	2.3	137.88	-899.89
K09	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	6.0	0.00	1622.23	2660.00	-1037.77	2.3	137.88	-899.89
K08	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	6.0	0.92	1622.23	2660.92	-1038.69	2.3	137.88	-900.81
K07	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	6.0	2.52	1622.23	2662.52	-1040.29	2.3	137.88	-902.41
K10	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	6.0	5.23	1622.23	2665.23	-1043.00	2.3	137.88	-905.12
K34	Diff	Unroad	B	29.40	119.38	34.0	10.0	26.8	12.5	0.00	3509.77	4853.77	-1344.00	4.0	370.17	-973.83
K39	Diff	Unroad	B	29.40	119.38	34.0	10.0	26.8	12.5	0.00	3509.77	4853.77	-1344.00	4.0	370.17	-973.83
K41	Diff	Unroad	B	29.40	119.38	34.0	10.0	26.8	12.5	4.08	3509.77	4857.85	-1348.08	4.0	370.17	-977.91
K32	Diff	Unroad	B	29.40	119.38	34.0	10.0	26.8	12.5	8.95	3509.77	4862.72	-1352.95	4.0	370.17	-982.78
K35	Diff	Unroad	B	29.40	119.38	34.0	10.0	26.8	12.5	15.67	3509.77	4869.44	-1359.67	4.0	370.17	-989.50
K22	Diff	Roaded	A	16.90	29.73	34.0	10.0	24.9	9.5	21.66	502.44	1527.13	-1024.69	2.3	11.10	-1013.59
K01	Diff	Roaded	A	16.90	29.73	34.0	10.0	36.0	6.0	0.00	502.44	1508.83	-1006.39	2.3	-14.41	-1020.80
K09	Diff	Roaded	A	16.90	29.73	34.0	10.0	36.0	6.0	0.00	502.44	1508.83	-1006.39	2.3	-14.41	-1020.80
K08	Diff	Roaded	A	16.90	29.73	34.0	10.0	36.0	6.0	0.92	502.44	1509.75	-1007.31	2.3	-14.41	-1021.72
K07	Diff	Roaded	A	16.90	29.73	34.0	10.0	36.0	6.0	2.52	502.44	1511.35	-1008.91	2.3	-14.41	-1023.32
K10	Diff	Roaded	A	16.90	29.73	34.0	10.0	36.0	6.0	5.23	502.44	1514.06	-1011.62	2.3	-14.41	-1026.03
K14	Diff	Roaded	A	16.90	29.73	34.0	10.0	35.1	7.5	0.00	502.44	1572.58	-1070.14	2.3	-12.34	-1082.48
K03	Diff	Roaded	A	16.90	29.73	34.0	10.0	35.1	7.5	3.99	502.44	1576.57	-1074.13	2.3	-12.34	-1086.47
K15	Diff	Roaded	A	16.90	29.73	34.0	10.0	36.0	7.5	0.00	502.44	1587.79	-1085.35	2.3	-14.41	-1099.76

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K31	Norm	Unroad	A	16.90	95.99	34.0	10.0	21.2	8.0	7.28	1622.23	2906.16	-1283.93	2.3	171.90	-1112.03
K44	Diff	Roaded	A	16.90	29.73	34.0	10.0	40.6	7.5	0.00	502.44	1665.53	-1163.09	2.3	-24.98	-1188.07
K32	Diff	Roaded	A	16.90	29.73	34.0	10.0	26.8	12.5	8.95	502.44	1704.45	-1202.01	2.3	6.73	-1195.27
K35	Diff	Roaded	A	16.90	29.73	34.0	10.0	26.8	12.5	15.67	502.44	1711.17	-1208.73	2.3	6.73	-1201.99
K05	Norm	Unroad	A	16.90	95.99	34.0	10.0	33.2	7.5	4.49	1622.23	2983.92	-1361.69	2.3	144.32	-1217.37
K11	Norm	Unroad	A	16.90	95.99	34.0	10.0	33.2	7.5	5.86	1622.23	2985.29	-1363.06	2.3	144.32	-1218.74
K24	Norm	Unroad	A	16.90	95.99	34.0	10.0	21.2	8.5	2.89	1622.23	3024.02	-1401.79	2.3	171.90	-1229.89
K25	Norm	Unroad	A	16.90	95.99	34.0	10.0	21.2	8.5	13.22	1622.23	3034.35	-1412.12	2.3	171.90	-1240.22
K28	Norm	Unroad	A	16.90	95.99	34.0	10.0	21.2	8.5	14.24	1622.23	3035.37	-1413.14	2.3	171.90	-1241.24
K26	Norm	Unroad	A	16.90	95.99	34.0	10.0	21.2	8.5	22.28	1622.23	3043.41	-1421.18	2.3	171.90	-1249.28
K14	Norm	Unroad	A	16.90	95.99	34.0	10.0	35.1	7.5	0.00	1622.23	3011.54	-1389.31	2.3	139.95	-1249.36
K03	Norm	Unroad	A	16.90	95.99	34.0	10.0	35.1	7.5	3.99	1622.23	3015.53	-1393.30	2.3	139.95	-1253.35
K04	Norm	Unroad	A	16.90	95.99	34.0	10.0	33.2	7.5	44.70	1622.23	3024.13	-1401.90	2.3	144.32	-1257.58
K19	Norm	Unroad	A	16.90	95.99	34.0	10.0	21.2	8.5	31.75	1622.23	3052.88	-1430.65	2.3	171.90	-1258.75
K15	Norm	Unroad	A	16.90	95.99	34.0	10.0	36.0	7.5	0.00	1622.23	3026.75	-1404.52	2.3	137.88	-1266.64
K44	Norm	Unroad	A	16.90	95.99	34.0	10.0	40.6	7.5	0.00	1622.23	3104.49	-1482.26	2.3	127.31	-1354.95
K45	Norm	Unroad	A	16.90	95.99	34.0	10.0	40.6	7.5	17.09	1622.23	3121.58	-1499.35	2.3	127.31	-1372.04
K21	Isol	Roaded	C	26.90	20.85	34.0	10.0	24.9	6.0	16.04	560.87	1926.28	-1365.41	3.7	-14.82	-1380.23
K21	Isol	Roaded	B	29.40	20.85	34.0	10.0	24.9	6.0	16.04	612.99	2073.53	-1460.54	4.0	-16.19	-1476.73
K20	Norm	Unroad	A	16.90	95.99	34.0	10.0	24.9	9.5	3.92	1622.23	3332.08	-1709.85	2.3	163.39	-1546.46
K22	Norm	Unroad	A	16.90	95.99	34.0	10.0	24.9	9.5	21.66	1622.23	3349.82	-1727.59	2.3	163.39	-1564.20
K13	Norm	Unroad	A	16.90	95.99	34.0	10.0	19.4	10.0	24.31	1622.23	3381.77	-1759.54	2.3	176.03	-1583.50
K29	Norm	Unroad	A	16.90	95.99	34.0	10.0	32.3	10.0	4.12	1622.23	3579.59	-1957.36	2.3	146.39	-1810.97
K30	Norm	Unroad	A	16.90	95.99	34.0	10.0	32.3	10.0	7.73	1622.23	3583.20	-1960.97	2.3	146.39	-1814.58
K17	Diff	Unroad	A	16.90	29.73	34.0	10.0	24.9	6.0	1.84	502.44	2474.25	-1971.81	2.3	11.10	-1960.71
K42	Diff	Unroad	B	29.40	119.38	34.0	10.0	34.2	15.5	11.31	3509.77	5816.14	-2306.37	4.0	340.58	-1965.78
K21	Diff	Unroad	A	16.90	29.73	34.0	10.0	24.9	6.0	16.04	502.44	2488.45	-1986.01	2.3	11.10	-1974.91
K18	Diff	Unroad	A	16.90	29.73	34.0	10.0	24.0	6.5	7.02	502.44	2586.47	-2084.03	2.3	13.17	-2070.86
K01	Diff	Unroad	A	16.90	29.73	34.0	10.0	36.0	6.0	0.00	502.44	2660.00	-2157.56	2.3	-14.41	-2171.97
K09	Diff	Unroad	A	16.90	29.73	34.0	10.0	36.0	6.0	0.00	502.44	2660.00	-2157.56	2.3	-14.41	-2171.97

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K08	Diff	Unroad	A	16.90	29.73	34.0	10.0	36.0	6.0	0.92	502.44	2660.92	-2158.48	2.3	-14.41	-2172.89
K07	Diff	Unroad	A	16.90	29.73	34.0	10.0	36.0	6.0	2.52	502.44	2662.52	-2160.08	2.3	-14.41	-2174.49
K10	Diff	Unroad	A	16.90	29.73	34.0	10.0	36.0	6.0	5.23	502.44	2665.23	-2162.79	2.3	-14.41	-2177.20
K34	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	0.00	1622.23	4093.77	-2471.54	2.3	159.03	-2312.51
K36	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	0.00	1622.23	4093.77	-2471.54	2.3	159.03	-2312.51
K37	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	0.00	1622.23	4093.77	-2471.54	2.3	159.03	-2312.51
K39	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	0.00	1622.23	4093.77	-2471.54	2.3	159.03	-2312.51
K41	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	4.08	1622.23	4097.85	-2475.62	2.3	159.03	-2316.59
K32	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	8.95	1622.23	4102.72	-2480.49	2.3	159.03	-2321.46
K35	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	15.67	1622.23	4109.44	-2487.21	2.3	159.03	-2328.18
K40	Norm	Unroad	A	16.90	95.99	34.0	10.0	26.8	12.5	36.48	1622.23	4130.25	-2508.02	2.3	159.03	-2348.99
K31	Diff	Unroad	A	16.90	29.73	34.0	10.0	21.2	8.0	7.28	502.44	2906.16	-2403.72	2.3	19.61	-2384.12
K11	Diff	Unroad	A	16.90	29.73	34.0	10.0	33.2	7.5	5.86	502.44	2985.29	-2482.85	2.3	-7.98	-2490.83
K24	Diff	Unroad	A	16.90	29.73	34.0	10.0	21.2	8.5	2.89	502.44	3024.02	-2521.58	2.3	19.61	-2501.98
K25	Diff	Unroad	A	16.90	29.73	34.0	10.0	21.2	8.5	13.22	502.44	3034.35	-2531.91	2.3	19.61	-2512.31
K28	Diff	Unroad	A	16.90	29.73	34.0	10.0	21.2	8.5	14.24	502.44	3035.37	-2532.93	2.3	19.61	-2513.33
K26	Diff	Unroad	A	16.90	29.73	34.0	10.0	21.2	8.5	22.28	502.44	3043.41	-2540.97	2.3	19.61	-2521.37
K14	Diff	Unroad	A	16.90	29.73	34.0	10.0	35.1	7.5	0.00	502.44	3011.54	-2509.10	2.3	-12.34	-2521.45
K03	Diff	Unroad	A	16.90	29.73	34.0	10.0	35.1	7.5	3.99	502.44	3015.53	-2513.09	2.3	-12.34	-2525.44
K19	Diff	Unroad	A	16.90	29.73	34.0	10.0	21.2	8.5	31.75	502.44	3052.88	-2550.44	2.3	19.61	-2530.84
K15	Diff	Unroad	A	16.90	29.73	34.0	10.0	36.0	7.5	0.00	502.44	3026.75	-2524.31	2.3	-14.41	-2538.72
K44	Diff	Unroad	A	16.90	29.73	34.0	10.0	40.6	7.5	0.00	502.44	3104.49	-2602.05	2.3	-24.98	-2627.04
K21	Isol	Unroad	B	29.40	20.85	34.0	10.0	24.9	6.0	16.04	612.99	3224.70	-2611.71	4.0	-16.19	-2627.90
K45	Diff	Unroad	A	16.90	29.73	34.0	10.0	40.6	7.5	17.09	502.44	3121.58	-2619.14	2.3	-24.98	-2644.13
K23	Diff	Unroad	A	16.90	29.73	34.0	10.0	24.9	9.5	0.00	502.44	3328.16	-2825.72	2.3	11.10	-2814.62
K20	Diff	Unroad	A	16.90	29.73	34.0	10.0	24.9	9.5	3.92	502.44	3332.08	-2829.64	2.3	11.10	-2818.54
K22	Diff	Unroad	A	16.90	29.73	34.0	10.0	24.9	9.5	21.66	502.44	3349.82	-2847.38	2.3	11.10	-2836.28
K31	Isol	Unroad	B	29.40	20.85	34.0	10.0	21.2	8.0	7.28	612.99	3596.16	-2983.17	4.0	-1.40	-2984.57
K29	Diff	Unroad	A	16.90	29.73	34.0	10.0	32.3	10.0	4.12	502.44	3579.59	-3077.15	2.3	-5.91	-3083.06
K30	Diff	Unroad	A	16.90	29.73	34.0	10.0	32.3	10.0	7.73	502.44	3583.20	-3080.76	2.3	-5.91	-3086.67

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K28	Isol	Unroad	B	29.40	20.85	34.0	10.0	21.2	8.5	14.24	612.99	3725.37	-3112.38	4.0	-1.40	-3113.78
K42	Norm	Unroad	A	16.90	95.99	34.0	10.0	34.2	15.5	11.31	1622.23	4963.64	-3341.41	2.3	142.02	-3199.39
K22	Isol	Unroad	C	26.90	20.85	34.0	10.0	24.9	9.5	21.66	560.87	3938.82	-3377.96	3.7	-14.82	-3392.77
K20	Isol	Unroad	B	29.40	20.85	34.0	10.0	24.9	9.5	3.92	612.99	4068.33	-3455.34	4.0	-16.19	-3471.53
K22	Isol	Unroad	B	29.40	20.85	34.0	10.0	24.9	9.5	21.66	612.99	4086.07	-3473.08	4.0	-16.19	-3489.27
K34	Diff	Unroad	A	16.90	29.73	34.0	10.0	26.8	12.5	0.00	502.44	4093.77	-3591.33	2.3	6.73	-3584.60
K37	Diff	Unroad	A	16.90	29.73	34.0	10.0	26.8	12.5	0.00	502.44	4093.77	-3591.33	2.3	6.73	-3584.60
K39	Diff	Unroad	A	16.90	29.73	34.0	10.0	26.8	12.5	0.00	502.44	4093.77	-3591.33	2.3	6.73	-3584.60
K41	Diff	Unroad	A	16.90	29.73	34.0	10.0	26.8	12.5	4.08	502.44	4097.85	-3595.41	2.3	6.73	-3588.68
K32	Diff	Unroad	A	16.90	29.73	34.0	10.0	26.8	12.5	8.95	502.44	4102.72	-3600.28	2.3	6.73	-3593.55
K29	Isol	Unroad	B	29.40	20.85	34.0	10.0	32.3	10.0	4.12	612.99	4408.34	-3795.35	4.0	-45.78	-3841.13
K30	Isol	Unroad	B	29.40	20.85	34.0	10.0	32.3	10.0	7.73	612.99	4411.95	-3798.96	4.0	-45.78	-3844.74
K32	Isol	Unroad	B	29.40	20.85	34.0	10.0	26.8	12.5	8.95	612.99	4862.72	-4249.73	4.0	-23.79	-4273.52
K35	Isol	Unroad	B	29.40	20.85	34.0	10.0	26.8	12.5	15.67	612.99	4869.44	-4256.45	4.0	-23.79	-4280.24
K42	Diff	Unroad	A	16.90	29.73	34.0	10.0	34.2	15.5	11.31	502.44	4963.64	-4461.20	2.3	-10.27	-4471.48
K21	Isol	Roaded	A	16.90	-169.03	34.0	10.0	24.9	6.0	16.04	-2856.61	1337.28	-4193.89	2.3	-445.73	-4639.61
K09	Isol	Roaded	A	16.90	-169.03	34.0	10.0	36.0	6.0	0.00	-2856.61	1508.83	-4365.44	2.3	-471.24	-4836.68
K08	Isol	Roaded	A	16.90	-169.03	34.0	10.0	36.0	6.0	0.92	-2856.61	1509.75	-4366.36	2.3	-471.24	-4837.60
K42	Isol	Unroad	B	29.40	20.85	34.0	10.0	34.2	15.5	11.31	612.99	5816.14	-5203.15	4.0	-53.38	-5256.53
K21	Isol	Unroad	A	16.90	-169.03	34.0	10.0	24.9	6.0	16.04	-2856.61	2488.45	-5345.06	2.3	-445.73	-5790.79
K09	Isol	Unroad	A	16.90	-169.03	34.0	10.0	36.0	6.0	0.00	-2856.61	2660.00	-5516.61	2.3	-471.24	-5987.85
K08	Isol	Unroad	A	16.90	-169.03	34.0	10.0	36.0	6.0	0.92	-2856.61	2660.92	-5517.53	2.3	-471.24	-5988.77
K31	Isol	Unroad	A	16.90	-169.03	34.0	10.0	21.2	8.0	7.28	-2856.61	2906.16	-5762.77	2.3	-437.22	-6199.99
K25	Isol	Unroad	A	16.90	-169.03	34.0	10.0	21.2	8.5	13.22	-2856.61	3034.35	-5890.96	2.3	-437.22	-6328.18
K28	Isol	Unroad	A	16.90	-169.03	34.0	10.0	21.2	8.5	14.24	-2856.61	3035.37	-5891.98	2.3	-437.22	-6329.20
K26	Isol	Unroad	A	16.90	-169.03	34.0	10.0	21.2	8.5	22.28	-2856.61	3043.41	-5900.02	2.3	-437.22	-6337.24
K14	Isol	Unroad	A	16.90	-169.03	34.0	10.0	35.1	7.5	0.00	-2856.61	3011.54	-5868.15	2.3	-469.17	-6337.32
K19	Isol	Unroad	A	16.90	-169.03	34.0	10.0	21.2	8.5	31.75	-2856.61	3052.88	-5909.49	2.3	-437.22	-6346.71
K15	Isol	Unroad	A	16.90	-169.03	34.0	10.0	36.0	7.5	0.00	-2856.61	3026.75	-5883.36	2.3	-471.24	-6354.60
K44	Isol	Unroad	A	16.90	-169.03	34.0	10.0	40.6	7.5	0.00	-2856.61	3104.49	-5961.10	2.3	-481.81	-6442.91

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Ketchikan Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
K45	Isol	Unroad	A	16.90	-169.03	34.0	10.0	40.6	7.5	17.09	-2856.61	3121.58	-5978.19	2.3	-481.81	-6460.00
K23	Isol	Unroad	A	16.90	-169.03	34.0	10.0	24.9	9.5	0.00	-2856.61	3328.16	-6184.77	2.3	-445.73	-6630.50
K20	Isol	Unroad	A	16.90	-169.03	34.0	10.0	24.9	9.5	3.92	-2856.61	3332.08	-6188.69	2.3	-445.73	-6634.42
K22	Isol	Unroad	A	16.90	-169.03	34.0	10.0	24.9	9.5	21.66	-2856.61	3349.82	-6206.43	2.3	-445.73	-6652.16
K13	Isol	Unroad	A	16.90	-169.03	34.0	10.0	19.4	10.0	24.31	-2856.61	3381.77	-6238.38	2.3	-433.09	-6671.46
K29	Isol	Unroad	A	16.90	-169.03	34.0	10.0	32.3	10.0	4.12	-2856.61	3579.59	-6436.20	2.3	-462.74	-6898.93
K30	Isol	Unroad	A	16.90	-169.03	34.0	10.0	32.3	10.0	7.73	-2856.61	3583.20	-6439.81	2.3	-462.74	-6902.54
K39	Isol	Unroad	A	16.90	-169.03	34.0	10.0	26.8	12.5	0.00	-2856.61	4093.77	-6950.38	2.3	-450.10	-7400.47
K41	Isol	Unroad	A	16.90	-169.03	34.0	10.0	26.8	12.5	4.08	-2856.61	4097.85	-6954.46	2.3	-450.10	-7404.55
K32	Isol	Unroad	A	16.90	-169.03	34.0	10.0	26.8	12.5	8.95	-2856.61	4102.72	-6959.33	2.3	-450.10	-7409.42
K35	Isol	Unroad	A	16.90	-169.03	34.0	10.0	26.8	12.5	15.67	-2856.61	4109.44	-6966.05	2.3	-450.10	-7416.14
K42	Isol	Unroad	A	16.90	-169.03	34.0	10.0	34.2	15.5	11.31	-2856.61	4963.64	-7820.25	2.3	-467.10	-8287.35

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S19	Norm	Roaded	D	40.90	300.22	34.0	10.0	30.0	4.0	0.00	12279.00	2838.15	9440.85	10.9	2939.83	12380.68
S35	Norm	Roaded	D	40.90	300.22	34.0	10.0	30.5	7.5	5.34	12279.00	3048.18	9230.82	10.9	2934.39	12165.21
S04	Norm	Roaded	D	40.90	300.22	34.0	10.0	34.2	7.0	0.00	12279.00	3167.85	9111.15	10.9	2894.14	12005.29
S23	Norm	Unroad	D	40.90	300.22	34.0	10.0	24.0	7.0	6.63	12279.00	3960.33	8318.67	10.9	3005.11	11323.78
S02	Norm	Unroad	D	40.90	300.22	34.0	10.0	30.5	7.5	0.00	12279.00	4331.80	7947.20	10.9	2934.39	10881.59
S04	Diff	Roaded	D	40.90	278.19	34.0	10.0	34.2	7.0	0.00	11377.97	3167.85	8210.13	10.9	2654.46	10864.59
S04	Norm	Unroad	D	40.90	300.22	34.0	10.0	34.2	7.0	0.00	12279.00	4370.88	7908.12	10.9	2894.14	10802.26
S10	Norm	Unroad	D	40.90	300.22	34.0	10.0	36.0	8.5	0.00	12279.00	4781.25	7497.75	10.9	2874.56	10372.30
S07	Diff	Unroad	D	40.90	278.19	34.0	10.0	28.6	7.5	8.24	11377.97	4262.33	7115.64	10.9	2715.39	9831.03
S10	Diff	Unroad	D	40.90	278.19	34.0	10.0	36.0	8.5	0.00	11377.97	4781.25	6596.72	10.9	2634.88	9231.60
S12	Diff	Unroad	D	40.90	278.19	34.0	10.0	38.8	8.5	0.00	11377.97	4895.77	6482.20	10.9	2604.42	9086.62
S01	Isol	Unroad	D	40.90	212.09	34.0	10.0	30.5	7.5	1.97	8674.48	4333.77	4340.71	10.9	1975.59	6316.30
S23	Norm	Roaded	C	30.20	158.81	34.0	10.0	24.0	7.0	6.63	4796.06	2136.70	2659.37	8.0	1082.96	3742.32
S19	Norm	Roaded	C	30.20	158.81	34.0	10.0	30.0	4.0	0.00	4796.06	2153.35	2642.71	8.0	1034.76	3677.47
S17	Norm	Roaded	C	30.20	158.81	34.0	10.0	30.0	7.5	0.00	4796.06	2337.59	2458.48	8.0	1034.76	3493.23
S25	Norm	Roaded	C	30.20	158.81	34.0	10.0	28.6	8.5	5.68	4796.06	2353.62	2442.44	8.0	1046.00	3488.44
S35	Norm	Roaded	C	30.20	158.81	34.0	10.0	30.5	7.5	5.34	4796.06	2358.03	2438.04	8.0	1030.74	3468.78
S04	Norm	Roaded	C	30.20	158.81	34.0	10.0	34.2	7.0	0.00	4796.06	2438.11	2357.96	8.0	1001.02	3358.97
S05	Norm	Roaded	C	30.20	158.81	34.0	10.0	34.2	7.0	0.00	4796.06	2438.11	2357.96	8.0	1001.02	3358.97
S09	Norm	Roaded	C	30.20	158.81	34.0	10.0	34.2	7.0	8.90	4796.06	2447.01	2349.06	8.0	1001.02	3350.07
S16	Norm	Roaded	C	30.20	158.81	34.0	10.0	33.2	8.0	0.00	4796.06	2460.54	2335.52	8.0	1009.05	3344.57
S22	Norm	Roaded	B	27.40	150.74	34.0	10.0	21.2	5.0	6.05	4130.28	1791.72	2338.56	7.3	944.14	3282.70
S21	Norm	Roaded	B	27.40	150.74	34.0	10.0	21.2	5.0	9.09	4130.28	1794.76	2335.52	7.3	944.14	3279.66
S18	Norm	Roaded	B	27.40	150.74	34.0	10.0	21.2	5.0	12.80	4130.28	1798.47	2331.81	7.3	944.14	3275.95
S10	Norm	Roaded	C	30.20	158.81	34.0	10.0	36.0	8.5	0.00	4796.06	2571.42	2224.64	8.0	986.56	3211.20
S11	Norm	Roaded	C	30.20	158.81	34.0	10.0	36.0	8.5	0.00	4796.06	2571.42	2224.64	8.0	986.56	3211.20
S22	Norm	Unroad	C	30.20	158.81	34.0	10.0	21.2	5.0	6.05	4796.06	2805.59	1990.47	8.0	1105.45	3095.92
S23	Norm	Roaded	B	27.40	150.74	34.0	10.0	24.0	7.0	6.63	4130.28	1974.30	2155.98	7.3	923.73	3079.71
S19	Norm	Roaded	B	27.40	150.74	34.0	10.0	30.0	4.0	0.00	4130.28	1974.15	2156.12	7.3	880.00	3036.13
S29	Norm	Roaded	B	27.40	150.74	34.0	10.0	24.0	8.0	0.00	4130.28	2020.30	2109.97	7.3	923.73	3033.70

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S31	Norm	Roaded	B	27.40	150.74	34.0	10.0	24.0	8.0	9.50	4130.28	2029.80	2100.47	7.3	923.73	3024.20
S33	Norm	Roaded	B	27.40	150.74	34.0	10.0	24.0	8.0	11.69	4130.28	2031.99	2098.28	7.3	923.73	3022.01
S19	Norm	Unroad	C	30.20	158.81	34.0	10.0	30.0	4.0	0.00	4796.06	2840.80	1955.26	8.0	1034.76	2990.02
S17	Norm	Roaded	B	27.40	150.74	34.0	10.0	30.0	7.5	0.00	4130.28	2158.39	1971.89	7.3	880.00	2851.89
S25	Norm	Roaded	B	27.40	150.74	34.0	10.0	28.6	8.5	5.68	4130.28	2178.34	1951.93	7.3	890.21	2842.14
S35	Norm	Roaded	B	27.40	150.74	34.0	10.0	30.5	7.5	5.34	4130.28	2177.43	1952.85	7.3	876.36	2829.21
S04	Norm	Roaded	B	27.40	150.74	34.0	10.0	34.2	7.0	0.00	4130.28	2247.15	1883.13	7.3	849.39	2732.52
S05	Norm	Roaded	B	27.40	150.74	34.0	10.0	34.2	7.0	0.00	4130.28	2247.15	1883.13	7.3	849.39	2732.52
S09	Norm	Roaded	B	27.40	150.74	34.0	10.0	34.2	7.0	8.90	4130.28	2256.05	1874.23	7.3	849.39	2723.62
S16	Norm	Roaded	B	27.40	150.74	34.0	10.0	33.2	8.0	0.00	4130.28	2272.38	1857.89	7.3	856.68	2714.57
S22	Diff	Roaded	C	30.20	125.88	34.0	10.0	21.2	5.0	6.05	3801.58	1946.28	1855.30	8.0	840.92	2696.21
S21	Diff	Roaded	C	30.20	125.88	34.0	10.0	21.2	5.0	9.09	3801.58	1949.32	1852.26	8.0	840.92	2693.17
S10	Norm	Roaded	B	27.40	150.74	34.0	10.0	36.0	8.5	0.00	4130.28	2375.42	1754.85	7.3	836.27	2591.12
S11	Norm	Roaded	B	27.40	150.74	34.0	10.0	36.0	8.5	0.00	4130.28	2375.42	1754.85	7.3	836.27	2591.12
S23	Norm	Unroad	C	30.20	158.81	34.0	10.0	24.0	7.0	6.63	4796.06	3339.73	1456.33	8.0	1082.96	2539.29
S12	Norm	Roaded	B	27.40	150.74	34.0	10.0	38.8	8.5	0.00	4130.28	2452.14	1678.13	7.3	815.86	2494.00
S29	Diff	Roaded	C	30.20	125.88	34.0	10.0	24.0	8.0	0.00	3801.58	2182.70	1618.87	8.0	818.42	2437.29
S22	Norm	Unroad	B	27.40	150.74	34.0	10.0	21.2	5.0	6.05	4130.28	2651.03	1479.25	7.3	944.14	2423.39
S21	Norm	Unroad	B	27.40	150.74	34.0	10.0	21.2	5.0	9.09	4130.28	2654.07	1476.21	7.3	944.14	2420.35
S19	Diff	Roaded	C	30.20	125.88	34.0	10.0	30.0	4.0	0.00	3801.58	2153.35	1648.22	8.0	770.22	2418.45
S18	Norm	Unroad	B	27.40	150.74	34.0	10.0	21.2	5.0	12.80	4130.28	2657.78	1472.50	7.3	944.14	2416.64
S19	Norm	Unroad	B	27.40	150.74	34.0	10.0	30.0	4.0	0.00	4130.28	2661.60	1468.68	7.3	880.00	2348.68
S27	Norm	Unroad	C	30.20	158.81	34.0	10.0	24.0	8.0	0.00	4796.06	3557.60	1238.46	8.0	1082.96	2321.42
S31	Norm	Unroad	C	30.20	158.81	34.0	10.0	24.0	8.0	9.50	4796.06	3567.10	1228.96	8.0	1082.96	2311.92
S26	Norm	Unroad	C	30.20	158.81	34.0	10.0	24.0	8.0	11.35	4796.06	3568.95	1227.11	8.0	1082.96	2310.07
S07	Norm	Unroad	C	30.20	158.81	34.0	10.0	28.6	7.5	8.24	4796.06	3592.51	1203.55	8.0	1046.00	2249.55
S08	Norm	Unroad	C	30.20	158.81	34.0	10.0	28.6	7.5	11.94	4796.06	3596.21	1199.85	8.0	1046.00	2245.85
S17	Diff	Roaded	C	30.20	125.88	34.0	10.0	30.0	7.5	0.00	3801.58	2337.59	1463.99	8.0	770.22	2234.21
S25	Diff	Roaded	C	30.20	125.88	34.0	10.0	28.6	8.5	5.68	3801.58	2353.62	1447.95	8.0	781.47	2229.42
S17	Norm	Unroad	C	30.20	158.81	34.0	10.0	30.0	7.5	0.00	4796.06	3626.55	1169.51	8.0	1034.76	2204.27

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S02	Norm	Unroad	C	30.20	158.81	34.0	10.0	30.5	7.5	0.00	4796.06	3641.65	1154.41	8.0	1030.74	2185.15
S01	Norm	Unroad	C	30.20	158.81	34.0	10.0	30.5	7.5	1.97	4796.06	3643.62	1152.44	8.0	1030.74	2183.18
S35	Norm	Unroad	C	30.20	158.81	34.0	10.0	30.5	7.5	5.34	4796.06	3646.99	1149.07	8.0	1030.74	2179.81
S04	Norm	Unroad	C	30.20	158.81	34.0	10.0	34.2	7.0	0.00	4796.06	3641.14	1154.92	8.0	1001.02	2155.94
S05	Norm	Unroad	C	30.20	158.81	34.0	10.0	34.2	7.0	0.00	4796.06	3641.14	1154.92	8.0	1001.02	2155.94
S09	Norm	Unroad	C	30.20	158.81	34.0	10.0	34.2	7.0	8.90	4796.06	3650.04	1146.02	8.0	1001.02	2147.04
S22	Diff	Roaded	B	27.40	116.78	34.0	10.0	21.2	5.0	6.05	3199.77	1791.72	1408.05	7.3	696.63	2104.68
S21	Diff	Roaded	B	27.40	116.78	34.0	10.0	21.2	5.0	9.09	3199.77	1794.76	1405.01	7.3	696.63	2101.64
S04	Diff	Roaded	C	30.20	125.88	34.0	10.0	34.2	7.0	0.00	3801.58	2438.11	1363.47	8.0	736.48	2099.95
S05	Diff	Roaded	C	30.20	125.88	34.0	10.0	34.2	7.0	0.00	3801.58	2438.11	1363.47	8.0	736.48	2099.95
S18	Diff	Roaded	B	27.40	116.78	34.0	10.0	21.2	5.0	12.80	3199.77	1798.47	1401.30	7.3	696.63	2097.93
S13	Norm	Roaded	B	27.40	150.74	34.0	10.0	48.0	10.0	0.00	4130.28	2783.18	1347.10	7.3	748.81	2095.91
S16	Diff	Roaded	C	30.20	125.88	34.0	10.0	33.2	8.0	0.00	3801.58	2460.54	1341.03	8.0	744.52	2085.55
S20	Norm	Roaded	B	27.40	150.74	34.0	10.0	48.0	10.0	10.85	4130.28	2794.03	1336.25	7.3	748.81	2085.06
S25	Norm	Unroad	C	30.20	158.81	34.0	10.0	28.6	8.5	5.68	4796.06	3814.45	981.61	8.0	1046.00	2027.61
S16	Norm	Unroad	C	30.20	158.81	34.0	10.0	33.2	8.0	0.00	4796.06	3835.44	960.62	8.0	1009.05	1969.67
S23	Diff	Roaded	B	27.40	116.78	34.0	10.0	24.0	7.0	6.63	3199.77	1974.30	1225.48	7.3	676.22	1901.69
S23	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	7.0	6.63	4130.28	3177.33	952.95	7.3	923.73	1876.68
S19	Diff	Roaded	B	27.40	116.78	34.0	10.0	30.0	4.0	0.00	3199.77	1974.15	1225.62	7.3	632.49	1858.11
S29	Diff	Roaded	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	2020.30	1179.47	7.3	676.22	1855.69
S30	Diff	Roaded	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	2020.30	1179.47	7.3	676.22	1855.69
S32	Diff	Roaded	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	2020.30	1179.47	7.3	676.22	1855.69
S33	Diff	Roaded	B	27.40	116.78	34.0	10.0	24.0	8.0	11.69	3199.77	2031.99	1167.78	7.3	676.22	1844.00
S22	Diff	Unroad	C	30.20	125.88	34.0	10.0	21.2	5.0	6.05	3801.58	2805.59	995.99	8.0	840.92	1836.90
S18	Diff	Unroad	C	30.20	125.88	34.0	10.0	21.2	5.0	12.80	3801.58	2812.34	989.24	8.0	840.92	1830.15
S10	Norm	Unroad	C	30.20	158.81	34.0	10.0	36.0	8.5	0.00	4796.06	4032.25	763.81	8.0	986.56	1750.37
S11	Norm	Unroad	C	30.20	158.81	34.0	10.0	36.0	8.5	0.00	4796.06	4032.25	763.81	8.0	986.56	1750.37
S22	Norm	Roaded	A	22.00	119.51	34.0	10.0	21.2	5.0	6.05	2629.22	1493.64	1135.58	5.9	575.31	1710.89
S21	Norm	Roaded	A	22.00	119.51	34.0	10.0	21.2	5.0	9.09	2629.22	1496.68	1132.54	5.9	575.31	1707.85
S18	Norm	Roaded	A	22.00	119.51	34.0	10.0	21.2	5.0	12.80	2629.22	1500.39	1128.83	5.9	575.31	1704.14

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S17	Diff	Roaded	B	27.40	116.78	34.0	10.0	30.0	7.5	0.00	3199.77	2158.39	1041.39	7.3	632.49	1673.87
S25	Diff	Roaded	B	27.40	116.78	34.0	10.0	28.6	8.5	5.68	3199.77	2178.34	1021.43	7.3	642.69	1664.12
S27	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	8.0	0.00	4130.28	3395.20	735.08	7.3	923.73	1658.81
S28	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	8.0	0.00	4130.28	3395.20	735.08	7.3	923.73	1658.81
S29	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	8.0	0.00	4130.28	3395.20	735.08	7.3	923.73	1658.81
S35	Diff	Roaded	B	27.40	116.78	34.0	10.0	30.5	7.5	5.34	3199.77	2177.43	1022.35	7.3	628.84	1651.19
S31	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	8.0	9.50	4130.28	3404.70	725.58	7.3	923.73	1649.31
S26	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	8.0	11.35	4130.28	3406.55	723.73	7.3	923.73	1647.46
S33	Norm	Unroad	B	27.40	150.74	34.0	10.0	24.0	8.0	11.69	4130.28	3406.89	723.39	7.3	923.73	1647.12
S12	Norm	Unroad	C	30.20	158.81	34.0	10.0	38.8	8.5	0.00	4796.06	4116.81	679.25	8.0	964.06	1643.32
S07	Norm	Unroad	B	27.40	150.74	34.0	10.0	28.6	7.5	8.24	4130.28	3417.23	713.05	7.3	890.21	1603.25
S08	Norm	Unroad	B	27.40	150.74	34.0	10.0	28.6	7.5	11.94	4130.28	3420.93	709.35	7.3	890.21	1599.55
S17	Norm	Unroad	B	27.40	150.74	34.0	10.0	30.0	7.5	0.00	4130.28	3447.35	682.93	7.3	880.00	1562.93
S04	Diff	Roaded	B	27.40	116.78	34.0	10.0	34.2	7.0	0.00	3199.77	2247.15	952.63	7.3	601.88	1554.50
S05	Diff	Roaded	B	27.40	116.78	34.0	10.0	34.2	7.0	0.00	3199.77	2247.15	952.63	7.3	601.88	1554.50
S09	Diff	Roaded	B	27.40	116.78	34.0	10.0	34.2	7.0	8.90	3199.77	2256.05	943.73	7.3	601.88	1545.60
S02	Norm	Unroad	B	27.40	150.74	34.0	10.0	30.5	7.5	0.00	4130.28	3461.05	669.23	7.3	876.36	1545.58
S01	Norm	Unroad	B	27.40	150.74	34.0	10.0	30.5	7.5	1.97	4130.28	3463.02	667.26	7.3	876.36	1543.61
S35	Norm	Unroad	B	27.40	150.74	34.0	10.0	30.5	7.5	5.34	4130.28	3466.39	663.89	7.3	876.36	1540.24
S16	Diff	Roaded	B	27.40	116.78	34.0	10.0	33.2	8.0	0.00	3199.77	2272.38	927.39	7.3	609.16	1536.55
S04	Norm	Unroad	B	27.40	150.74	34.0	10.0	34.2	7.0	0.00	4130.28	3450.18	680.10	7.3	849.39	1529.49
S05	Norm	Unroad	B	27.40	150.74	34.0	10.0	34.2	7.0	0.00	4130.28	3450.18	680.10	7.3	849.39	1529.49
S23	Norm	Roaded	A	22.00	119.51	34.0	10.0	24.0	7.0	6.63	2629.22	1661.10	968.12	5.9	558.92	1527.05
S19	Norm	Roaded	A	22.00	119.51	34.0	10.0	30.0	4.0	0.00	2629.22	1628.55	1000.67	5.9	523.81	1524.48
S09	Norm	Unroad	B	27.40	150.74	34.0	10.0	34.2	7.0	8.90	4130.28	3459.08	671.20	7.3	849.39	1520.59
S29	Norm	Roaded	A	22.00	119.51	34.0	10.0	24.0	8.0	0.00	2629.22	1707.10	922.12	5.9	558.92	1481.04
S26	Norm	Roaded	A	22.00	119.51	34.0	10.0	24.0	8.0	11.35	2629.22	1718.45	910.77	5.9	558.92	1469.69
S33	Norm	Roaded	A	22.00	119.51	34.0	10.0	24.0	8.0	11.69	2629.22	1718.79	910.43	5.9	558.92	1469.35
S10	Diff	Roaded	B	27.40	116.78	34.0	10.0	36.0	8.5	0.00	3199.77	2375.42	824.35	7.3	588.76	1413.11
S11	Diff	Roaded	B	27.40	116.78	34.0	10.0	36.0	8.5	0.00	3199.77	2375.42	824.35	7.3	588.76	1413.11

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S25	Norm	Unroad	B	27.40	150.74	34.0	10.0	28.6	8.5	5.68	4130.28	3639.17	491.11	7.3	890.21	1381.31
S17	Norm	Roaded	A	22.00	119.51	34.0	10.0	30.0	7.5	0.00	2629.22	1812.79	816.44	5.9	523.81	1340.25
S16	Norm	Unroad	B	27.40	150.74	34.0	10.0	33.2	8.0	0.00	4130.28	3647.28	483.00	7.3	856.68	1339.67
S35	Norm	Roaded	A	22.00	119.51	34.0	10.0	30.5	7.5	5.34	2629.22	1829.13	800.10	5.9	520.89	1320.98
S25	Norm	Roaded	A	22.00	119.51	34.0	10.0	28.6	8.5	5.68	2629.22	1840.30	788.92	5.9	532.01	1320.92
S23	Diff	Unroad	C	30.20	125.88	34.0	10.0	24.0	7.0	6.63	3801.58	3339.73	461.85	8.0	818.42	1280.27
S04	Norm	Roaded	A	22.00	119.51	34.0	10.0	34.2	7.0	0.00	2629.22	1878.87	750.35	5.9	499.23	1249.59
S05	Norm	Roaded	A	22.00	119.51	34.0	10.0	34.2	7.0	0.00	2629.22	1878.87	750.35	5.9	499.23	1249.59
S22	Diff	Unroad	B	27.40	116.78	34.0	10.0	21.2	5.0	6.05	3199.77	2651.03	548.74	7.3	696.63	1245.37
S21	Diff	Unroad	B	27.40	116.78	34.0	10.0	21.2	5.0	9.09	3199.77	2654.07	545.70	7.3	696.63	1242.33
S09	Norm	Roaded	A	22.00	119.51	34.0	10.0	34.2	7.0	8.90	2629.22	1887.77	741.45	5.9	499.23	1240.69
S18	Diff	Unroad	B	27.40	116.78	34.0	10.0	21.2	5.0	12.80	3199.77	2657.78	541.99	7.3	696.63	1238.62
S16	Norm	Roaded	A	22.00	119.51	34.0	10.0	33.2	8.0	0.00	2629.22	1909.50	719.72	5.9	505.09	1224.80
S19	Diff	Unroad	B	27.40	116.78	34.0	10.0	30.0	4.0	0.00	3199.77	2661.60	538.17	7.3	632.49	1170.66
S10	Norm	Unroad	B	27.40	150.74	34.0	10.0	36.0	8.5	0.00	4130.28	3836.25	294.03	7.3	836.27	1130.30
S11	Norm	Unroad	B	27.40	150.74	34.0	10.0	36.0	8.5	0.00	4130.28	3836.25	294.03	7.3	836.27	1130.30
S10	Norm	Roaded	A	22.00	119.51	34.0	10.0	36.0	8.5	0.00	2629.22	1997.42	631.80	5.9	488.70	1120.50
S11	Norm	Roaded	A	22.00	119.51	34.0	10.0	36.0	8.5	0.00	2629.22	1997.42	631.80	5.9	488.70	1120.50
S26	Diff	Unroad	C	30.20	125.88	34.0	10.0	24.0	8.0	11.35	3801.58	3568.95	232.63	8.0	818.42	1051.05
S12	Norm	Roaded	A	22.00	119.51	34.0	10.0	38.8	8.5	0.00	2629.22	2059.02	570.20	5.9	472.31	1042.51
S12	Norm	Unroad	B	27.40	150.74	34.0	10.0	38.8	8.5	0.00	4130.28	3912.97	217.31	7.3	815.86	1033.17
S07	Diff	Unroad	C	30.20	125.88	34.0	10.0	28.6	7.5	8.24	3801.58	3592.51	209.07	8.0	781.47	990.54
S13	Norm	Unroad	C	30.20	158.81	34.0	10.0	48.0	10.0	0.00	4796.06	4731.40	64.66	8.0	890.16	954.82
S20	Norm	Unroad	C	30.20	158.81	34.0	10.0	48.0	10.0	10.85	4796.06	4742.25	53.81	8.0	890.16	943.97
S02	Diff	Unroad	C	30.20	125.88	34.0	10.0	30.5	7.5	0.00	3801.58	3641.65	159.93	8.0	766.21	926.13
S01	Diff	Unroad	C	30.20	125.88	34.0	10.0	30.5	7.5	1.97	3801.58	3643.62	157.96	8.0	766.21	924.16
S35	Diff	Unroad	C	30.20	125.88	34.0	10.0	30.5	7.5	5.34	3801.58	3646.99	154.59	8.0	766.21	920.79
S13	Diff	Roaded	B	27.40	116.78	34.0	10.0	48.0	10.0	0.00	3199.77	2783.18	416.59	7.3	501.30	917.89
S04	Diff	Unroad	C	30.20	125.88	34.0	10.0	34.2	7.0	0.00	3801.58	3641.14	160.44	8.0	736.48	896.92
S05	Diff	Unroad	C	30.20	125.88	34.0	10.0	34.2	7.0	0.00	3801.58	3641.14	160.44	8.0	736.48	896.92

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S09	Diff	Unroad	C	30.20	125.88	34.0	10.0	34.2	7.0	8.90	3801.58	3650.04	151.54	8.0	736.48	888.02
S22	Norm	Unroad	A	22.00	119.51	34.0	10.0	21.2	5.0	6.05	2629.22	2352.95	276.27	5.9	575.31	851.58
S21	Norm	Unroad	A	22.00	119.51	34.0	10.0	21.2	5.0	9.09	2629.22	2355.99	273.23	5.9	575.31	848.54
S19	Norm	Unroad	A	22.00	119.51	34.0	10.0	30.0	4.0	0.00	2629.22	2316.00	313.22	5.9	523.81	837.03
S13	Norm	Roaded	A	22.00	119.51	34.0	10.0	48.0	10.0	0.00	2629.22	2340.38	288.84	5.9	418.48	707.32
S23	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	7.0	6.63	3199.77	3177.33	22.44	7.3	676.22	698.66
S20	Norm	Roaded	A	22.00	119.51	34.0	10.0	48.0	10.0	10.85	2629.22	2351.23	277.99	5.9	418.48	696.47
S10	Diff	Unroad	C	30.20	125.88	34.0	10.0	36.0	8.5	0.00	3801.58	4032.25	-230.67	8.0	722.02	491.35
S11	Diff	Unroad	C	30.20	125.88	34.0	10.0	36.0	8.5	0.00	3801.58	4032.25	-230.67	8.0	722.02	491.35
S27	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	3395.20	-195.43	7.3	676.22	480.79
S28	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	3395.20	-195.43	7.3	676.22	480.79
S29	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	3395.20	-195.43	7.3	676.22	480.79
S30	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	3395.20	-195.43	7.3	676.22	480.79
S32	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	0.00	3199.77	3395.20	-195.43	7.3	676.22	480.79
S31	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	9.50	3199.77	3404.70	-204.93	7.3	676.22	471.29
S26	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	11.35	3199.77	3406.55	-206.78	7.3	676.22	469.44
S33	Diff	Unroad	B	27.40	116.78	34.0	10.0	24.0	8.0	11.69	3199.77	3406.89	-207.12	7.3	676.22	469.10
S07	Diff	Unroad	B	27.40	116.78	34.0	10.0	28.6	7.5	8.24	3199.77	3417.23	-217.46	7.3	642.69	425.23
S08	Diff	Unroad	B	27.40	116.78	34.0	10.0	28.6	7.5	11.94	3199.77	3420.93	-221.16	7.3	642.69	421.53
S17	Diff	Unroad	B	27.40	116.78	34.0	10.0	30.0	7.5	0.00	3199.77	3447.35	-247.58	7.3	632.49	384.91
S12	Diff	Unroad	C	30.20	125.88	34.0	10.0	38.8	8.5	0.00	3801.58	4116.81	-315.23	8.0	699.53	384.30
S13	Norm	Unroad	B	27.40	150.74	34.0	10.0	48.0	10.0	0.00	4130.28	4501.80	-371.52	7.3	748.81	377.29
S02	Diff	Unroad	B	27.40	116.78	34.0	10.0	30.5	7.5	0.00	3199.77	3461.05	-261.28	7.3	628.84	367.57
S03	Diff	Unroad	B	27.40	116.78	34.0	10.0	30.5	7.5	0.00	3199.77	3461.05	-261.28	7.3	628.84	367.57
S20	Norm	Unroad	B	27.40	150.74	34.0	10.0	48.0	10.0	10.85	4130.28	4512.65	-382.37	7.3	748.81	366.44
S01	Diff	Unroad	B	27.40	116.78	34.0	10.0	30.5	7.5	1.97	3199.77	3463.02	-263.25	7.3	628.84	365.60
S35	Diff	Unroad	B	27.40	116.78	34.0	10.0	30.5	7.5	5.34	3199.77	3466.39	-266.62	7.3	628.84	362.23
S04	Diff	Unroad	B	27.40	116.78	34.0	10.0	34.2	7.0	0.00	3199.77	3450.18	-250.41	7.3	601.88	351.47
S05	Diff	Unroad	B	27.40	116.78	34.0	10.0	34.2	7.0	0.00	3199.77	3450.18	-250.41	7.3	601.88	351.47
S09	Diff	Unroad	B	27.40	116.78	34.0	10.0	34.2	7.0	8.90	3199.77	3459.08	-259.31	7.3	601.88	342.57

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S23	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	7.0	6.63	2629.22	2864.13	-234.91	5.9	558.92	324.01
S25	Diff	Unroad	B	27.40	116.78	34.0	10.0	28.6	8.5	5.68	3199.77	3639.17	-439.40	7.3	642.69	203.29
S16	Diff	Unroad	B	27.40	116.78	34.0	10.0	33.2	8.0	0.00	3199.77	3647.28	-447.51	7.3	609.16	161.66
S22	Diff	Roaded	A	22.00	62.23	34.0	10.0	21.2	5.0	6.05	1369.06	1493.64	-124.58	5.9	240.11	115.53
S21	Diff	Roaded	A	22.00	62.23	34.0	10.0	21.2	5.0	9.09	1369.06	1496.68	-127.62	5.9	240.11	112.49
S18	Diff	Roaded	A	22.00	62.23	34.0	10.0	21.2	5.0	12.80	1369.06	1500.39	-131.33	5.9	240.11	108.78
S27	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	0.00	2629.22	3082.00	-452.78	5.9	558.92	106.14
S28	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	0.00	2629.22	3082.00	-452.78	5.9	558.92	106.14
S29	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	0.00	2629.22	3082.00	-452.78	5.9	558.92	106.14
S30	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	0.00	2629.22	3082.00	-452.78	5.9	558.92	106.14
S31	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	9.50	2629.22	3091.50	-462.28	5.9	558.92	96.64
S26	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	11.35	2629.22	3093.35	-464.13	5.9	558.92	94.79
S33	Norm	Unroad	A	22.00	119.51	34.0	10.0	24.0	8.0	11.69	2629.22	3093.69	-464.47	5.9	558.92	94.45
S07	Norm	Unroad	A	22.00	119.51	34.0	10.0	28.6	7.5	8.24	2629.22	3079.19	-449.97	5.9	532.01	82.04
S08	Norm	Unroad	A	22.00	119.51	34.0	10.0	28.6	7.5	11.94	2629.22	3082.89	-453.67	5.9	532.01	78.34
S17	Norm	Unroad	A	22.00	119.51	34.0	10.0	30.0	7.5	0.00	2629.22	3101.75	-472.53	5.9	523.81	51.28
S04	Norm	Unroad	A	22.00	119.51	34.0	10.0	34.2	7.0	0.00	2629.22	3081.90	-452.68	5.9	499.23	46.55
S05	Norm	Unroad	A	22.00	119.51	34.0	10.0	34.2	7.0	0.00	2629.22	3081.90	-452.68	5.9	499.23	46.55
S09	Norm	Unroad	A	22.00	119.51	34.0	10.0	34.2	7.0	8.90	2629.22	3090.80	-461.58	5.9	499.23	37.65
S02	Norm	Unroad	A	22.00	119.51	34.0	10.0	30.5	7.5	0.00	2629.22	3112.75	-483.53	5.9	520.89	37.36
S03	Norm	Unroad	A	22.00	119.51	34.0	10.0	30.5	7.5	0.00	2629.22	3112.75	-483.53	5.9	520.89	37.36
S01	Norm	Unroad	A	22.00	119.51	34.0	10.0	30.5	7.5	1.97	2629.22	3114.72	-485.50	5.9	520.89	35.39
S35	Norm	Unroad	A	22.00	119.51	34.0	10.0	30.5	7.5	5.34	2629.22	3118.09	-488.87	5.9	520.89	32.02
S10	Diff	Unroad	B	27.40	116.78	34.0	10.0	36.0	8.5	0.00	3199.77	3836.25	-636.48	7.3	588.76	-47.72
S11	Diff	Unroad	B	27.40	116.78	34.0	10.0	36.0	8.5	0.00	3199.77	3836.25	-636.48	7.3	588.76	-47.72
S23	Diff	Roaded	A	22.00	62.23	34.0	10.0	24.0	7.0	6.63	1369.06	1661.10	-292.04	5.9	223.72	-68.31
S19	Diff	Roaded	A	22.00	62.23	34.0	10.0	30.0	4.0	0.00	1369.06	1628.55	-259.49	5.9	188.61	-70.88
S29	Diff	Roaded	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	1707.10	-338.04	5.9	223.72	-114.32
S30	Diff	Roaded	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	1707.10	-338.04	5.9	223.72	-114.32
S33	Diff	Roaded	A	22.00	62.23	34.0	10.0	24.0	8.0	11.69	1369.06	1718.79	-349.73	5.9	223.72	-126.01

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S25	Norm	Unroad	A	22.00	119.51	34.0	10.0	28.6	8.5	5.68	2629.22	3301.13	-671.91	5.9	532.01	-139.90
S12	Diff	Unroad	B	27.40	116.78	34.0	10.0	38.8	8.5	0.00	3199.77	3912.97	-713.20	7.3	568.35	-144.85
S16	Norm	Unroad	A	22.00	119.51	34.0	10.0	33.2	8.0	0.00	2629.22	3284.40	-655.18	5.9	505.09	-150.09
S17	Diff	Roaded	A	22.00	62.23	34.0	10.0	30.0	7.5	0.00	1369.06	1812.79	-443.73	5.9	188.61	-255.12
S01	Diff	Roaded	A	22.00	62.23	34.0	10.0	30.5	7.5	1.97	1369.06	1825.76	-456.70	5.9	185.68	-271.01
S35	Diff	Roaded	A	22.00	62.23	34.0	10.0	30.5	7.5	5.34	1369.06	1829.13	-460.07	5.9	185.68	-274.38
S25	Diff	Roaded	A	22.00	62.23	34.0	10.0	28.6	8.5	5.68	1369.06	1840.30	-471.24	5.9	196.80	-274.44
S13	Diff	Unroad	C	30.20	125.88	34.0	10.0	48.0	10.0	0.00	3801.58	4731.40	-929.82	8.0	625.63	-304.20
S20	Diff	Unroad	C	30.20	125.88	34.0	10.0	48.0	10.0	10.85	3801.58	4742.25	-940.67	8.0	625.63	-315.05
S10	Norm	Unroad	A	22.00	119.51	34.0	10.0	36.0	8.5	0.00	2629.22	3458.25	-829.03	5.9	488.70	-340.33
S11	Norm	Unroad	A	22.00	119.51	34.0	10.0	36.0	8.5	0.00	2629.22	3458.25	-829.03	5.9	488.70	-340.33
S04	Diff	Roaded	A	22.00	62.23	34.0	10.0	34.2	7.0	0.00	1369.06	1878.87	-509.81	5.9	164.03	-345.77
S05	Diff	Roaded	A	22.00	62.23	34.0	10.0	34.2	7.0	0.00	1369.06	1878.87	-509.81	5.9	164.03	-345.77
S09	Diff	Roaded	A	22.00	62.23	34.0	10.0	34.2	7.0	8.90	1369.06	1887.77	-518.71	5.9	164.03	-354.67
S16	Diff	Roaded	A	22.00	62.23	34.0	10.0	33.2	8.0	0.00	1369.06	1909.50	-540.44	5.9	169.88	-370.56
S12	Norm	Unroad	A	22.00	119.51	34.0	10.0	38.8	8.5	0.00	2629.22	3519.85	-890.63	5.9	472.31	-418.32
S10	Diff	Roaded	A	22.00	62.23	34.0	10.0	36.0	8.5	0.00	1369.06	1997.42	-628.36	5.9	153.50	-474.87
S11	Diff	Roaded	A	22.00	62.23	34.0	10.0	36.0	8.5	0.00	1369.06	1997.42	-628.36	5.9	153.50	-474.87
S22	Diff	Unroad	A	22.00	62.23	34.0	10.0	21.2	5.0	6.05	1369.06	2352.95	-983.89	5.9	240.11	-743.78
S21	Diff	Unroad	A	22.00	62.23	34.0	10.0	21.2	5.0	9.09	1369.06	2355.99	-986.93	5.9	240.11	-746.82
S18	Diff	Unroad	A	22.00	62.23	34.0	10.0	21.2	5.0	12.80	1369.06	2359.70	-990.64	5.9	240.11	-750.53
S19	Diff	Unroad	A	22.00	62.23	34.0	10.0	30.0	4.0	0.00	1369.06	2316.00	-946.94	5.9	188.61	-758.33
S13	Diff	Unroad	B	27.40	116.78	34.0	10.0	48.0	10.0	0.00	3199.77	4501.80	-1302.03	7.3	501.30	-800.73
S20	Diff	Unroad	B	27.40	116.78	34.0	10.0	48.0	10.0	10.85	3199.77	4512.65	-1312.88	7.3	501.30	-811.58
S13	Diff	Roaded	A	22.00	62.23	34.0	10.0	48.0	10.0	0.00	1369.06	2340.38	-971.32	5.9	83.27	-888.05
S20	Diff	Roaded	A	22.00	62.23	34.0	10.0	48.0	10.0	10.85	1369.06	2351.23	-982.17	5.9	83.27	-898.90
S13	Norm	Unroad	A	22.00	119.51	34.0	10.0	48.0	10.0	0.00	2629.22	4059.00	-1429.78	5.9	418.48	-1011.30
S20	Norm	Unroad	A	22.00	119.51	34.0	10.0	48.0	10.0	10.85	2629.22	4069.85	-1440.63	5.9	418.48	-1022.15
S23	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	7.0	6.63	1369.06	2864.13	-1495.07	5.9	223.72	-1271.35
S27	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	3082.00	-1712.94	5.9	223.72	-1489.22

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S28	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	3082.00	-1712.94	5.9	223.72	-1489.22
S29	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	3082.00	-1712.94	5.9	223.72	-1489.22
S30	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	3082.00	-1712.94	5.9	223.72	-1489.22
S32	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	0.00	1369.06	3082.00	-1712.94	5.9	223.72	-1489.22
S31	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	9.50	1369.06	3091.50	-1722.44	5.9	223.72	-1498.72
S26	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	11.35	1369.06	3093.35	-1724.29	5.9	223.72	-1500.57
S33	Diff	Unroad	A	22.00	62.23	34.0	10.0	24.0	8.0	11.69	1369.06	3093.69	-1724.63	5.9	223.72	-1500.91
S07	Diff	Unroad	A	22.00	62.23	34.0	10.0	28.6	7.5	8.24	1369.06	3079.19	-1710.13	5.9	196.80	-1513.33
S08	Diff	Unroad	A	22.00	62.23	34.0	10.0	28.6	7.5	11.94	1369.06	3082.89	-1713.83	5.9	196.80	-1517.03
S17	Diff	Unroad	A	22.00	62.23	34.0	10.0	30.0	7.5	0.00	1369.06	3101.75	-1732.69	5.9	188.61	-1544.08
S04	Diff	Unroad	A	22.00	62.23	34.0	10.0	34.2	7.0	0.00	1369.06	3081.90	-1712.84	5.9	164.03	-1548.81
S05	Diff	Unroad	A	22.00	62.23	34.0	10.0	34.2	7.0	0.00	1369.06	3081.90	-1712.84	5.9	164.03	-1548.81
S09	Diff	Unroad	A	22.00	62.23	34.0	10.0	34.2	7.0	8.90	1369.06	3090.80	-1721.74	5.9	164.03	-1557.71
S02	Diff	Unroad	A	22.00	62.23	34.0	10.0	30.5	7.5	0.00	1369.06	3112.75	-1743.69	5.9	185.68	-1558.01
S03	Diff	Unroad	A	22.00	62.23	34.0	10.0	30.5	7.5	0.00	1369.06	3112.75	-1743.69	5.9	185.68	-1558.01
S01	Diff	Unroad	A	22.00	62.23	34.0	10.0	30.5	7.5	1.97	1369.06	3114.72	-1745.66	5.9	185.68	-1559.98
S35	Diff	Unroad	A	22.00	62.23	34.0	10.0	30.5	7.5	5.34	1369.06	3118.09	-1749.03	5.9	185.68	-1563.35
S25	Diff	Unroad	A	22.00	62.23	34.0	10.0	28.6	8.5	5.68	1369.06	3301.13	-1932.07	5.9	196.80	-1735.27
S16	Diff	Unroad	A	22.00	62.23	34.0	10.0	33.2	8.0	0.00	1369.06	3284.40	-1915.34	5.9	169.88	-1745.46
S35	Isol	Roaded	B	27.40	14.89	34.0	10.0	30.5	7.5	5.34	407.99	2177.43	-1769.44	7.3	-113.77	-1883.21
S10	Diff	Unroad	A	22.00	62.23	34.0	10.0	36.0	8.5	0.00	1369.06	3458.25	-2089.19	5.9	153.50	-1935.69
S11	Diff	Unroad	A	22.00	62.23	34.0	10.0	36.0	8.5	0.00	1369.06	3458.25	-2089.19	5.9	153.50	-1935.69
S12	Diff	Unroad	A	22.00	62.23	34.0	10.0	38.8	8.5	0.00	1369.06	3519.85	-2150.79	5.9	137.11	-2013.68
S22	Isol	Unroad	B	27.40	14.89	34.0	10.0	21.2	5.0	6.05	407.99	2651.03	-2243.04	7.3	-45.99	-2289.03
S19	Isol	Unroad	B	27.40	14.89	34.0	10.0	30.0	4.0	0.00	407.99	2661.60	-2253.61	7.3	-110.13	-2363.74
S23	Isol	Unroad	C	30.20	27.08	34.0	10.0	24.0	7.0	6.63	817.82	3339.73	-2521.91	8.0	24.74	-2497.17
S13	Diff	Unroad	A	22.00	62.23	34.0	10.0	48.0	10.0	0.00	1369.06	4059.00	-2689.94	5.9	83.27	-2606.67
S20	Diff	Unroad	A	22.00	62.23	34.0	10.0	48.0	10.0	10.85	1369.06	4069.85	-2700.79	5.9	83.27	-2617.52
S20	Isol	Roaded	B	27.40	14.89	34.0	10.0	48.0	10.0	10.85	407.99	2794.03	-2386.04	7.3	-241.32	-2627.36
S28	Isol	Unroad	C	30.20	27.08	34.0	10.0	24.0	8.0	0.00	817.82	3557.60	-2739.78	8.0	24.74	-2715.04

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S30	Isol	Unroad	C	30.20	27.08	34.0	10.0	24.0	8.0	0.00	817.82	3557.60	-2739.78	8.0	24.74	-2715.04
S07	Isol	Unroad	C	30.20	27.08	34.0	10.0	28.6	7.5	8.24	817.82	3592.51	-2774.69	8.0	-12.21	-2786.90
S23	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	7.0	6.63	407.99	3177.33	-2769.34	7.3	-66.40	-2835.74
S02	Isol	Unroad	C	30.20	27.08	34.0	10.0	30.5	7.5	0.00	817.82	3641.65	-2823.83	8.0	-27.47	-2851.31
S01	Isol	Unroad	C	30.20	27.08	34.0	10.0	30.5	7.5	1.97	817.82	3643.62	-2825.80	8.0	-27.47	-2853.28
S04	Isol	Unroad	C	30.20	27.08	34.0	10.0	34.2	7.0	0.00	817.82	3641.14	-2823.32	8.0	-57.20	-2880.52
S09	Isol	Unroad	C	30.20	27.08	34.0	10.0	34.2	7.0	8.90	817.82	3650.04	-2832.22	8.0	-57.20	-2889.42
S25	Isol	Unroad	C	30.20	27.08	34.0	10.0	28.6	8.5	5.68	817.82	3814.45	-2996.63	8.0	-12.21	-3008.84
S27	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	8.0	0.00	407.99	3395.20	-2987.21	7.3	-66.40	-3053.61
S28	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	8.0	0.00	407.99	3395.20	-2987.21	7.3	-66.40	-3053.61
S29	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	8.0	0.00	407.99	3395.20	-2987.21	7.3	-66.40	-3053.61
S30	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	8.0	0.00	407.99	3395.20	-2987.21	7.3	-66.40	-3053.61
S31	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	8.0	9.50	407.99	3404.70	-2996.71	7.3	-66.40	-3063.11
S33	Isol	Unroad	B	27.40	14.89	34.0	10.0	24.0	8.0	11.69	407.99	3406.89	-2998.90	7.3	-66.40	-3065.30
S07	Isol	Unroad	B	27.40	14.89	34.0	10.0	28.6	7.5	8.24	407.99	3417.23	-3009.24	7.3	-99.92	-3109.17
S02	Isol	Unroad	B	27.40	14.89	34.0	10.0	30.5	7.5	0.00	407.99	3461.05	-3053.06	7.3	-113.77	-3166.84
S03	Isol	Unroad	B	27.40	14.89	34.0	10.0	30.5	7.5	0.00	407.99	3461.05	-3053.06	7.3	-113.77	-3166.84
S01	Isol	Unroad	B	27.40	14.89	34.0	10.0	30.5	7.5	1.97	407.99	3463.02	-3055.03	7.3	-113.77	-3168.81
S35	Isol	Unroad	B	27.40	14.89	34.0	10.0	30.5	7.5	5.34	407.99	3466.39	-3058.40	7.3	-113.77	-3172.18
S04	Isol	Unroad	B	27.40	14.89	34.0	10.0	34.2	7.0	0.00	407.99	3450.18	-3042.19	7.3	-140.74	-3182.93
S05	Isol	Unroad	B	27.40	14.89	34.0	10.0	34.2	7.0	0.00	407.99	3450.18	-3042.19	7.3	-140.74	-3182.93
S09	Isol	Unroad	B	27.40	14.89	34.0	10.0	34.2	7.0	8.90	407.99	3459.08	-3051.09	7.3	-140.74	-3191.83
S25	Isol	Unroad	B	27.40	14.89	34.0	10.0	28.6	8.5	5.68	407.99	3639.17	-3231.18	7.3	-99.92	-3331.11
S12	Isol	Unroad	C	30.20	27.08	34.0	10.0	38.8	8.5	0.00	817.82	4116.81	-3298.99	8.0	-94.15	-3393.14
S10	Isol	Unroad	B	27.40	14.89	34.0	10.0	36.0	8.5	0.00	407.99	3836.25	-3428.26	7.3	-153.86	-3582.12
S11	Isol	Unroad	B	27.40	14.89	34.0	10.0	36.0	8.5	0.00	407.99	3836.25	-3428.26	7.3	-153.86	-3582.12
S12	Isol	Unroad	B	27.40	14.89	34.0	10.0	38.8	8.5	0.00	407.99	3912.97	-3504.98	7.3	-174.27	-3679.25
S13	Isol	Unroad	B	27.40	14.89	34.0	10.0	48.0	10.0	0.00	407.99	4501.80	-4093.81	7.3	-241.32	-4335.13
S20	Isol	Unroad	B	27.40	14.89	34.0	10.0	48.0	10.0	10.85	407.99	4512.65	-4104.66	7.3	-241.32	-4345.98
S19	Isol	Roaded	A	22.00	-109.64	34.0	10.0	30.0	4.0	0.00	-2412.08	1628.55	-4040.63	5.9	-817.17	-4857.81

Table B-12. (continued)

Value Of Existing Timber -- Even-aged Mgt.

Stikine Area

TTRA MA #	Log. Oper	Road/ Unroad	Vol Class	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
S35	Isol	Roaded	A	22.00	-109.64	34.0	10.0	30.5	7.5	5.34	-2412.08	1829.13	-4241.21	5.9	-820.10	-5061.30
S22	Isol	Unroad	A	22.00	-109.64	34.0	10.0	21.2	5.0	6.05	-2412.08	2352.95	-4765.03	5.9	-765.68	-5530.71
S19	Isol	Unroad	A	22.00	-109.64	34.0	10.0	30.0	4.0	0.00	-2412.08	2316.00	-4728.08	5.9	-817.17	-5545.25
S20	Isol	Roaded	A	22.00	-109.64	34.0	10.0	48.0	10.0	10.85	-2412.08	2351.23	-4763.31	5.9	-922.51	-5685.82
S23	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	7.0	6.63	-2412.08	2864.13	-5276.21	5.9	-782.06	-6058.27
S27	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	0.00	-2412.08	3082.00	-5494.08	5.9	-782.06	-6276.14
S28	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	0.00	-2412.08	3082.00	-5494.08	5.9	-782.06	-6276.14
S29	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	0.00	-2412.08	3082.00	-5494.08	5.9	-782.06	-6276.14
S30	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	0.00	-2412.08	3082.00	-5494.08	5.9	-782.06	-6276.14
S31	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	9.50	-2412.08	3091.50	-5503.58	5.9	-782.06	-6285.64
S26	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	11.35	-2412.08	3093.35	-5505.43	5.9	-782.06	-6287.49
S33	Isol	Unroad	A	22.00	-109.64	34.0	10.0	24.0	8.0	11.69	-2412.08	3093.69	-5505.77	5.9	-782.06	-6287.83
S07	Isol	Unroad	A	22.00	-109.64	34.0	10.0	28.6	7.5	8.24	-2412.08	3079.19	-5491.27	5.9	-808.98	-6300.25
S17	Isol	Unroad	A	22.00	-109.64	34.0	10.0	30.0	7.5	0.00	-2412.08	3101.75	-5513.83	5.9	-817.17	-6331.00
S04	Isol	Unroad	A	22.00	-109.64	34.0	10.0	34.2	7.0	0.00	-2412.08	3081.90	-5493.98	5.9	-841.75	-6335.73
S05	Isol	Unroad	A	22.00	-109.64	34.0	10.0	34.2	7.0	0.00	-2412.08	3081.90	-5493.98	5.9	-841.75	-6335.73
S09	Isol	Unroad	A	22.00	-109.64	34.0	10.0	34.2	7.0	8.90	-2412.08	3090.80	-5502.88	5.9	-841.75	-6344.63
S02	Isol	Unroad	A	22.00	-109.64	34.0	10.0	30.5	7.5	0.00	-2412.08	3112.75	-5524.83	5.9	-820.10	-6344.93
S03	Isol	Unroad	A	22.00	-109.64	34.0	10.0	30.5	7.5	0.00	-2412.08	3112.75	-5524.83	5.9	-820.10	-6344.93
S01	Isol	Unroad	A	22.00	-109.64	34.0	10.0	30.5	7.5	1.97	-2412.08	3114.72	-5526.80	5.9	-820.10	-6346.90
S35	Isol	Unroad	A	22.00	-109.64	34.0	10.0	30.5	7.5	5.34	-2412.08	3118.09	-5530.17	5.9	-820.10	-6350.27
S25	Isol	Unroad	A	22.00	-109.64	34.0	10.0	28.6	8.5	5.68	-2412.08	3301.13	-5713.21	5.9	-808.98	-6522.19
S16	Isol	Unroad	A	22.00	-109.64	34.0	10.0	33.2	8.0	0.00	-2412.08	3284.40	-5696.48	5.9	-835.90	-6532.38
S10	Isol	Unroad	A	22.00	-109.64	34.0	10.0	36.0	8.5	0.00	-2412.08	3458.25	-5870.33	5.9	-852.29	-6722.62
S11	Isol	Unroad	A	22.00	-109.64	34.0	10.0	36.0	8.5	0.00	-2412.08	3458.25	-5870.33	5.9	-852.29	-6722.62
S12	Isol	Unroad	A	22.00	-109.64	34.0	10.0	38.8	8.5	0.00	-2412.08	3519.85	-5931.93	5.9	-868.67	-6800.60
S14	Isol	Unroad	A	22.00	-109.64	34.0	10.0	36.0	10.0	0.00	-2412.08	3795.00	-6207.08	5.9	-852.29	-7059.37
S13	Isol	Unroad	A	22.00	-109.64	34.0	10.0	48.0	10.0	0.00	-2412.08	4059.00	-6471.08	5.9	-922.51	-7393.59
S20	Isol	Unroad	A	22.00	-109.64	34.0	10.0	48.0	10.0	10.85	-2412.08	4069.85	-6481.93	5.9	-922.51	-7404.44

Even-aged Management -- The Regenerated Forest

This analysis used all costs and values associated with the management of one acre of timber land for one rotation length (from planting to final harvest). In essence, this analysis determines the economic value of one acre of bare land when managed solely for timber harvesting. The results of the analysis are found in Table B-13. The analysis is presented by Administrative Area and stand operability. The three areas are Chatham, Ketchikan, and Stikine and certain values have been averaged over these areas for simplifying the analysis. Logging operability is a primary factor in determining the timber's value. Normal operablility is standard cable and tractor, difficult may require long-span skyline systems, and isolated requires the use of the helicopter harvest method. The other significant components used in the analysis are:

Regen Volume Class - Tongass soil productivity is divided into three classes: low, medium, and high. Different volumes of timber per acre are associated with each soil productivity class thus differing potential revenues and costs.

Rotation Age (years) - This is the number of years a stand is allowed to grow before harvest. It is the number of years between successful regeneration and final harvest (clearcut).

Sawlog Volume MBF/ac - This is the merchantable sawlog volume in MBF (thousands of board feet) per acre when harvesting at the specified rotation age.

$/MBF - This is the value of each MBF of sawlog timber less logging costs (temporary roads, felling, bucking, skidding). This is the value of the timber at the landing.

FS admin $/MBF - This is the cost to the Forest Service to administer the timber sale. These costs occur at the time of harvesting.

Regen cost $/acre - This is the cost to the Forest Service to certify that the stand, once harvested, has successfully regenerated.

Haul cost $/MBF - This is the cost of transporting the logs from the landing to the mill site. It is dependent upon the distance the logs must be moved and the mode of transportation required (truck, tug, etc.). For this analysis, an average haul cost per Administrative Area was used.

Road miles per 1000 acres - This is the number of road miles required to access 1000 acres of suitable timber. For this analysis, it was assumed that the area had been roaded and only road maintenance and reconstruction was required. Road maintenance costs $547 per mile per year and road reconstruction costs $52,638 per mile at time of harvest. A proportion of these costs is Forest Service engineering support costs. For this analysis, an average road density value per Administrative area was used.

LTF cost $/ac - Log Transfer Facilities (LTF) are used to place the logs into the water for transportation by log raft or barge. Construction, or reconstruction, of these facilities takes place when an area is scheduled for harvest. For modeling purposes, total LTF cost of an area was divided by the total number of tentatively suitable acres. This "per acre" value was applied to every acre receiving a timber management prescription. This analysis uses an LTF reconstruction cost per acre averaged for each Administrative Area.

Road Maint. - Each acre is assumed to be currently roaded at the predetermined density. These roads are maintained annually throughout the rotation at $547 per mile (this cost includes a percentage of closed roads receiving only custodial maintenance). This cost represents the total maintenance expenditures incurred over the rotation.

Sawlog Total Revenue - This is the total value of one acre of sawtimber at the landing. It is obtained by multiplying the MBF/ac by the $/MBF value.

Sawlog Total Costs - Sum of Forest Service administrative costs, haul costs, road costs, and LTF costs.

Net Sawlog Revenue - This is the difference between total sawlog revenue and total sawlog costs.

Utility Volume MBF/ac - Utility volume is those logs that have less than 33 1/3 percent net sawlog volume (the volume that can be used for industrial wood products) but contain at least 50 percent firm usable pulp chips. Utility volume forest-wide 1980-90 averaged 14 percent of the total harvest volume.

Net Utility Revenue - This is the net revenue obtained from the utility volume. The utility revenue may be positive when sawlog revenue is negative. The net sawlog volume is less all sale preparation, roading, LTF costs while net utility revenue is less only haul costs. This was done for accounting purposes only.

Total Net Revenue - This is the sum of the net sawlog and net utility revenues. It represents the financial return expected off an acre of forest land given the land characteristics, costs, values, and rotation age.

Table B-13.

Value of Regenerated Timber -- Even-aged Mgt.

Normal Operability

Chatham Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
========	=======	======	=======	=====	======	=====	=======	=====	=======	========	========	=========	======	=======	=======
Low-Vol	80	8.50	64.70	34.0	10.0	37.1	8.8	4.52	385.09	549.95	1467.17	-917.22	0.43	11.73	-905.49
Low-Vol	90	13.40	69.75	34.0	10.0	37.1	8.8	4.52	433.22	934.65	1863.70	-929.05	0.67	21.88	-907.17
Low-Vol	100	18.40	74.46	34.0	10.0	37.1	8.8	4.52	481.36	1370.06	2267.33	-897.27	0.92	34.37	-862.90
Low-Vol	110	24.30	79.17	34.0	10.0	37.1	8.8	4.52	529.50	1923.83	2734.96	-811.13	1.22	51.12	-760.01
Low-Vol	120	30.10	83.88	34.0	10.0	37.1	8.8	4.52	577.63	2524.79	3195.48	-670.69	1.51	70.40	-600.28
Low-Vol	130	35.00	88.59	34.0	10.0	37.1	8.8	4.52	625.77	3100.65	3592.00	-491.35	1.75	90.11	-401.24
Low-Vol	140	39.70	93.30	34.0	10.0	37.1	8.8	4.52	673.90	3704.01	3974.31	-270.30	1.99	111.56	-158.74
Low-Vol	150	44.70	98.01	34.0	10.0	37.1	8.8	4.52	722.04	4381.05	4377.94	3.10	2.24	136.13	139.24
Low-Vol	160	49.20	102.72	34.0	10.0	37.1	8.8	4.52	770.18	5053.82	4746.03	307.79	2.46	161.43	469.22
Low-Vol	170	55.10	107.43	34.0	10.0	37.1	8.8	4.52	818.31	5919.39	5213.66	705.74	2.76	193.76	899.50
Med-Vol	80	18.40	64.70	34.0	10.0	37.1	8.8	4.52	385.09	1190.48	2171.06	-980.58	0.92	25.39	-955.19
Med-Vol	90	25.70	69.75	34.0	10.0	37.1	8.8	4.52	433.22	1792.58	2738.23	-945.65	1.29	41.96	-903.70
Med-Vol	100	33.40	74.46	34.0	10.0	37.1	8.8	4.52	481.36	2486.96	3333.83	-846.87	1.67	62.39	-784.48
Med-Vol	110	40.40	79.17	34.0	10.0	37.1	8.8	4.52	529.50	3198.47	3879.67	-681.20	2.02	84.98	-596.22
Med-Vol	120	46.60	83.88	34.0	10.0	37.1	8.8	4.52	577.63	3908.81	4368.63	-459.82	2.33	109.00	-350.82
Med-Vol	130	53.60	88.59	34.0	10.0	37.1	8.8	4.52	625.77	4748.42	4914.46	-166.04	2.68	137.99	-28.05
Med-Vol	140	59.30	93.30	34.0	10.0	37.1	8.8	4.52	673.90	5532.69	5367.87	164.82	2.97	166.63	331.45
Med-Vol	150	65.30	98.01	34.0	10.0	37.1	8.8	4.52	722.04	6400.05	5842.60	557.45	3.27	198.87	756.32
Med-Vol	160	70.30	102.72	34.0	10.0	37.1	8.8	4.52	770.18	7221.22	6246.24	974.98	3.52	230.65	1205.63
Med-Vol	170	70.30	107.43	34.0	10.0	37.1	8.8	4.52	818.31	7552.33	6294.38	1257.95	3.52	247.21	1505.16
High-Vol	80	31.50	64.70	34.0	10.0	37.1	8.8	4.52	385.09	2038.05	3102.47	-1064.42	1.58	43.47	-1020.95
High-Vol	90	39.50	69.75	34.0	10.0	37.1	8.8	4.52	433.22	2755.13	3719.41	-964.28	1.98	64.48	-899.80
High-Vol	100	48.00	74.46	34.0	10.0	37.1	8.8	4.52	481.36	3574.08	4371.89	-797.81	2.40	89.66	-708.15
High-Vol	110	54.40	79.17	34.0	10.0	37.1	8.8	4.52	529.50	4306.85	4875.07	-568.22	2.72	114.43	-453.79
High-Vol	120	64.00	83.88	34.0	10.0	37.1	8.8	4.52	577.63	5368.32	5605.77	-237.45	3.20	149.70	-87.75
High-Vol	130	71.00	88.59	34.0	10.0	37.1	8.8	4.52	625.77	6289.89	6151.60	138.29	3.55	182.79	321.08
High-Vol	140	76.70	93.30	34.0	10.0	37.1	8.8	4.52	673.90	7156.11	6605.01	551.10	3.84	215.53	766.63
High-Vol	150	83.00	98.01	34.0	10.0	37.1	8.8	4.52	722.04	8134.83	7101.07	1033.76	4.15	252.78	1286.53
High-Vol	160	88.10	102.72	34.0	10.0	37.1	8.8	4.52	770.18	9049.63	7511.82	1537.81	4.41	289.06	1826.87
High-Vol	170	88.10	107.43	34.0	10.0	37.1	8.8	4.52	818.31	9464.58	7559.96	1904.63	4.41	309.80	2214.43

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Difficult Operability

Chatham Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	8.50	7.10	34.0	10.0	37.1	8.8	4.52	385.09	60.35	1467.17	-1406.82	0.43	-12.75	-1419.57
Low-Vol	90	13.40	13.18	34.0	10.0	37.1	8.8	4.52	433.22	176.61	1863.70	-1687.09	0.67	-16.03	-1703.11
Low-Vol	100	18.40	20.55	34.0	10.0	37.1	8.8	4.52	481.36	378.12	2267.33	-1889.21	0.92	-15.23	-1904.44
Low-Vol	110	24.30	27.92	34.0	10.0	37.1	8.8	4.52	529.50	678.46	2734.96	-2056.50	1.22	-11.15	-2067.66
Low-Vol	120	30.10	35.29	34.0	10.0	37.1	8.8	4.52	577.63	1062.23	3195.48	-2133.25	1.51	-2.72	-2135.97
Low-Vol	130	35.00	42.66	34.0	10.0	37.1	8.8	4.52	625.77	1493.10	3592.00	-2098.90	1.75	9.73	-2089.17
Low-Vol	140	39.70	50.03	34.0	10.0	37.1	8.8	4.52	673.90	1986.19	3974.31	-1988.12	1.99	25.67	-1962.45
Low-Vol	150	44.70	57.40	34.0	10.0	37.1	8.8	4.52	722.04	2565.78	4377.94	-1812.16	2.24	45.37	-1766.79
Low-Vol	160	49.20	64.77	34.0	10.0	37.1	8.8	4.52	770.18	3186.68	4746.03	-1559.35	2.46	68.07	-1491.28
Low-Vol	170	55.10	72.14	34.0	10.0	37.1	8.8	4.52	818.31	3974.91	5213.66	-1238.74	2.76	96.54	-1142.21
Med-Vol	80	18.40	7.10	34.0	10.0	37.1	8.8	4.52	385.09	130.64	2171.06	-2040.42	0.92	-27.60	-2068.02
Med-Vol	90	25.70	13.18	34.0	10.0	37.1	8.8	4.52	433.22	338.73	2738.23	-2399.50	1.29	-30.74	-2430.24
Med-Vol	100	33.40	20.55	34.0	10.0	37.1	8.8	4.52	481.36	686.37	3333.83	-2647.46	1.67	-27.64	-2675.10
Med-Vol	110	40.40	27.92	34.0	10.0	37.1	8.8	4.52	529.50	1127.97	3879.67	-2751.70	2.02	-18.54	-2770.25
Med-Vol	120	46.60	35.29	34.0	10.0	37.1	8.8	4.52	577.63	1644.51	4368.63	-2724.11	2.33	-4.22	-2728.33
Med-Vol	130	53.60	42.66	34.0	10.0	37.1	8.8	4.52	625.77	2286.58	4914.46	-2627.89	2.68	14.90	-2612.99
Med-Vol	140	59.30	50.03	34.0	10.0	37.1	8.8	4.52	673.90	2966.78	5367.87	-2401.09	2.97	38.34	-2362.75
Med-Vol	150	65.30	57.40	34.0	10.0	37.1	8.8	4.52	722.04	3748.22	5842.60	-2094.38	3.27	66.28	-2028.10
Med-Vol	160	70.30	64.77	34.0	10.0	37.1	8.8	4.52	770.18	4553.33	6246.24	-1692.91	3.52	97.26	-1595.65
Med-Vol	170	70.30	72.14	34.0	10.0	37.1	8.8	4.52	818.31	5071.44	6294.38	-1222.93	3.52	123.17	-1099.77
High-Vol	80	31.50	7.10	34.0	10.0	37.1	8.8	4.52	385.09	223.65	3102.47	-2878.82	1.58	-47.25	-2926.07
High-Vol	90	39.50	13.18	34.0	10.0	37.1	8.8	4.52	433.22	520.61	3719.41	-3198.80	1.98	-47.24	-3246.04
High-Vol	100	48.00	20.55	34.0	10.0	37.1	8.8	4.52	481.36	986.40	4371.89	-3385.49	2.40	-39.72	-3425.21
High-Vol	110	54.40	27.92	34.0	10.0	37.1	8.8	4.52	529.50	1518.85	4875.07	-3356.22	2.72	-24.97	-3381.19
High-Vol	120	64.00	35.29	34.0	10.0	37.1	8.8	4.52	577.63	2258.56	5605.77	-3347.21	3.20	-5.79	-3353.00
High-Vol	130	71.00	42.66	34.0	10.0	37.1	8.8	4.52	625.77	3028.86	6151.60	-3122.74	3.55	19.74	-3103.00
High-Vol	140	76.70	50.03	34.0	10.0	37.1	8.8	4.52	673.90	3837.30	6605.01	-2767.71	3.84	49.59	-2718.12
High-Vol	150	83.00	57.40	34.0	10.0	37.1	8.8	4.52	722.04	4764.20	7101.07	-2336.87	4.15	84.25	-2252.63
High-Vol	160	88.10	64.77	34.0	10.0	37.1	8.8	4.52	770.18	5706.24	7511.82	-1805.58	4.41	121.89	-1683.70
High-Vol	170	88.10	72.14	34.0	10.0	37.1	8.8	4.52	818.31	6355.53	7559.96	-1204.42	4.41	154.35	-1050.07

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Isolated Operability

Chatham Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	8.50	-171.33	34.0	10.0	37.1	8.8	4.52	385.09	-1456.31	1467.17	-2923.48	0.43	-88.58	-3012.06
Low-Vol	90	13.40	-157.57	34.0	10.0	37.1	8.8	4.52	433.22	-2111.44	1863.70	-3975.14	0.67	-130.43	-4105.57
Low-Vol	100	18.40	-141.20	34.0	10.0	37.1	8.8	4.52	481.36	-2598.08	2267.33	-4865.41	0.92	-164.04	-5029.45
Low-Vol	110	24.30	-125.83	34.0	10.0	37.1	8.8	4.52	529.50	-3057.67	2734.96	-5792.63	1.22	-197.96	-5990.59
Low-Vol	120	30.10	-110.46	34.0	10.0	37.1	8.8	4.52	577.63	-3324.85	3195.48	-6520.32	1.51	-222.08	-6742.40
Low-Vol	130	35.00	-95.09	34.0	10.0	37.1	8.8	4.52	625.77	-3328.15	3592.00	-6920.15	1.75	-231.33	-7151.48
Low-Vol	140	39.70	-79.72	34.0	10.0	37.1	8.8	4.52	673.90	-3164.88	3974.31	-7139.19	1.99	-231.89	-7371.08
Low-Vol	150	44.70	-64.35	34.0	10.0	37.1	8.8	4.52	722.04	-2876.45	4377.94	-7254.39	2.24	-226.74	-7481.13
Low-Vol	160	49.20	-48.98	34.0	10.0	37.1	8.8	4.52	770.18	-2409.82	4746.03	-7155.85	2.46	-211.76	-7367.60
Low-Vol	170	55.10	-33.61	34.0	10.0	37.1	8.8	4.52	818.31	-1851.91	5213.66	-7065.57	2.76	-194.81	-7260.37
Med-Vol	80	18.40	-171.33	34.0	10.0	37.1	8.8	4.52	385.09	-3152.47	2171.06	-5323.53	0.92	-191.76	-5515.29
Med-Vol	90	25.70	-157.57	34.0	10.0	37.1	8.8	4.52	433.22	-4049.55	2738.23	-6787.78	1.29	-250.15	-7037.93
Med-Vol	100	33.40	-141.20	34.0	10.0	37.1	8.8	4.52	481.36	-4716.08	3333.83	-8049.91	1.67	-297.76	-8347.68
Med-Vol	110	40.40	-125.83	34.0	10.0	37.1	8.8	4.52	529.50	-5083.53	3879.67	-8963.20	2.02	-329.12	-9292.32
Med-Vol	120	46.60	-110.46	34.0	10.0	37.1	8.8	4.52	577.63	-5147.44	4368.63	-9516.06	2.33	-343.81	-9859.88
Med-Vol	130	53.60	-95.09	34.0	10.0	37.1	8.8	4.52	625.77	-5096.82	4914.46	-10011.2	2.68	-354.27	-10365.5
Med-Vol	140	59.30	-79.72	34.0	10.0	37.1	8.8	4.52	673.90	-4727.40	5367.87	-10095.2	2.97	-346.37	-10441.6
Med-Vol	150	65.30	-64.35	34.0	10.0	37.1	8.8	4.52	722.04	-4202.06	5842.60	-10044.6	3.27	-331.23	-10375.8
Med-Vol	160	70.30	-48.98	34.0	10.0	37.1	8.8	4.52	770.18	-3443.29	6246.24	-9689.53	3.52	-302.57	-9992.11
Med-Vol	170	70.30	-33.61	34.0	10.0	37.1	8.8	4.52	818.31	-2362.78	6294.38	-8657.16	3.52	-248.55	-8905.71
High-Vol	80	31.50	-171.33	34.0	10.0	37.1	8.8	4.52	385.09	-5396.90	3102.47	-8499.37	1.58	-328.28	-8827.64
High-Vol	90	39.50	-157.57	34.0	10.0	37.1	8.8	4.52	433.22	-6224.02	3719.41	-9943.42	1.98	-384.47	-10327.9
High-Vol	100	48.00	-141.20	34.0	10.0	37.1	8.8	4.52	481.36	-6777.60	4371.89	-11149.4	2.40	-427.92	-11577.4
High-Vol	110	54.40	-125.83	34.0	10.0	37.1	8.8	4.52	529.50	-6845.15	4875.07	-11720.2	2.72	-443.17	-12163.3
High-Vol	120	64.00	-110.46	34.0	10.0	37.1	8.8	4.52	577.63	-7069.44	5605.77	-12675.2	3.20	-472.19	-13147.4
High-Vol	130	71.00	-95.09	34.0	10.0	37.1	8.8	4.52	625.77	-6751.39	6151.60	-12902.9	3.55	-469.27	-13372.2
High-Vol	140	76.70	-79.72	34.0	10.0	37.1	8.8	4.52	673.90	-6114.52	6605.01	-12719.5	3.84	-448.00	-13167.5
High-Vol	150	83.00	-64.35	34.0	10.0	37.1	8.8	4.52	722.04	-5341.05	7101.07	-12442.1	4.15	-421.02	-12863.1
High-Vol	160	88.10	-48.98	34.0	10.0	37.1	8.8	4.52	770.18	-4315.14	7511.82	-11826.9	4.41	-379.18	-12206.1
High-Vol	170	88.10	-33.61	34.0	10.0	37.1	8.8	4.52	818.31	-2961.04	7559.96	-10521.0	4.41	-311.48	-10832.4

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Normal Operability

Ketchikan Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	14.10	63.64	34.0	10.0	30.0	8.4	4.00	367.58	897.32	1726.14	-828.82	0.71	23.72	-805.10
Low-Vol	90	19.60	70.73	34.0	10.0	30.0	8.4	4.00	413.53	1386.31	2124.09	-737.78	0.98	39.92	-697.87
Low-Vol	100	25.50	77.09	34.0	10.0	30.0	8.4	4.00	459.48	1965.80	2547.64	-581.84	1.28	60.04	-521.80
Low-Vol	110	31.30	83.45	34.0	10.0	30.0	8.4	4.00	505.43	2611.99	2964.79	-352.80	1.57	83.65	-269.15
Low-Vol	120	37.10	89.81	34.0	10.0	30.0	8.4	4.00	551.38	3331.95	3381.94	-49.98	1.86	110.95	60.96
Low-Vol	130	42.60	96.17	34.0	10.0	30.0	8.4	4.00	597.32	4096.84	3779.88	316.96	2.13	140.94	457.90
Low-Vol	140	47.70	102.53	34.0	10.0	30.0	8.4	4.00	643.27	4890.68	4152.23	738.45	2.39	172.98	911.43
Low-Vol	150	52.30	108.89	34.0	10.0	30.0	8.4	4.00	689.22	5694.95	4492.58	1202.37	2.62	206.30	1408.67
Low-Vol	160	56.80	115.25	34.0	10.0	30.0	8.4	4.00	735.17	6546.20	4826.53	1719.67	2.84	242.11	1961.78
Low-Vol	170	56.80	121.61	34.0	10.0	30.0	8.4	4.00	781.12	6907.45	4872.48	2034.97	2.84	260.17	2295.15
Med-Vol	80	23.90	63.64	34.0	10.0	30.0	8.4	4.00	367.58	1521.00	2353.34	-832.35	1.20	40.20	-792.15
Med-Vol	90	31.70	70.73	34.0	10.0	30.0	8.4	4.00	413.53	2242.14	2898.49	-656.35	1.59	64.56	-591.79
Med-Vol	100	39.20	77.09	34.0	10.0	30.0	8.4	4.00	459.48	3021.93	3424.44	-402.51	1.96	92.30	-310.21
Med-Vol	110	46.40	83.45	34.0	10.0	30.0	8.4	4.00	505.43	3872.08	3931.19	-59.11	2.32	124.00	64.90
Med-Vol	120	53.30	89.81	34.0	10.0	30.0	8.4	4.00	551.38	4786.87	4418.74	368.14	2.67	159.39	527.53
Med-Vol	130	59.70	96.17	34.0	10.0	30.0	8.4	4.00	597.32	5741.35	4874.28	867.07	2.99	197.52	1064.58
Med-Vol	140	65.70	102.53	34.0	10.0	30.0	8.4	4.00	643.27	6736.22	5304.23	1431.99	3.29	238.26	1670.25
Med-Vol	150	71.00	108.89	34.0	10.0	30.0	8.4	4.00	689.22	7731.19	5689.38	2041.81	3.55	280.06	2321.87
Med-Vol	160	76.30	115.25	34.0	10.0	30.0	8.4	4.00	735.17	8793.58	6074.53	2719.05	3.82	325.23	3044.28
Med-Vol	170	76.30	121.61	34.0	10.0	30.0	8.4	4.00	781.12	9278.84	6120.48	3158.37	3.82	349.49	3507.86
High-Vol	80	35.00	63.64	34.0	10.0	30.0	8.4	4.00	367.58	2227.40	3063.74	-836.34	1.75	58.87	-777.47
High-Vol	90	44.40	70.73	34.0	10.0	30.0	8.4	4.00	413.53	3140.41	3711.29	-570.88	2.22	90.42	-480.46
High-Vol	100	53.50	77.09	34.0	10.0	30.0	8.4	4.00	459.48	4124.32	4339.64	-215.32	2.68	125.97	-89.36
High-Vol	110	61.70	83.45	34.0	10.0	30.0	8.4	4.00	505.43	5148.87	4910.39	238.48	3.09	164.89	403.37
High-Vol	120	69.40	89.81	34.0	10.0	30.0	8.4	4.00	551.38	6232.81	5449.14	783.68	3.47	207.54	991.22
High-Vol	130	76.50	96.17	34.0	10.0	30.0	8.4	4.00	597.32	7357.01	5949.48	1407.52	3.83	253.10	1660.62
High-Vol	140	83.20	102.53	34.0	10.0	30.0	8.4	4.00	643.27	8530.50	6424.23	2106.26	4.16	301.72	2407.99
High-Vol	150	89.00	108.89	34.0	10.0	30.0	8.4	4.00	689.22	9691.21	6841.38	2849.83	4.45	351.06	3200.89
High-Vol	160	94.60	115.25	34.0	10.0	30.0	8.4	4.00	735.17	10902.65	7245.73	3656.92	4.73	403.23	4060.16
High-Vol	170	94.60	121.61	34.0	10.0	30.0	8.4	4.00	781.12	11504.31	7291.68	4212.63	4.73	433.32	4645.95

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Difficult Operability

Ketchikan Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	14.10	7.89	34.0	10.0	30.0	8.4	4.00	367.58	111.25	1726.14	-1614.89	0.71	-15.59	-1630.48
Low-Vol	90	19.60	16.17	34.0	10.0	30.0	8.4	4.00	413.53	316.93	2124.09	-1807.16	0.98	-13.55	-1820.71
Low-Vol	100	25.50	25.14	34.0	10.0	30.0	8.4	4.00	459.48	641.07	2547.64	-1906.57	1.28	-6.20	-1912.77
Low-Vol	110	31.30	34.11	34.0	10.0	30.0	8.4	4.00	505.43	1067.64	2964.79	-1897.14	1.57	6.43	-1890.71
Low-Vol	120	37.10	43.08	34.0	10.0	30.0	8.4	4.00	551.38	1598.27	3381.94	-1783.67	1.86	24.26	-1759.40
Low-Vol	130	42.60	52.05	34.0	10.0	30.0	8.4	4.00	597.32	2217.33	3779.88	-1562.55	2.13	46.97	-1515.59
Low-Vol	140	47.70	61.02	34.0	10.0	30.0	8.4	4.00	643.27	2910.65	4152.23	-1241.58	2.39	73.98	-1167.59
Low-Vol	150	52.30	69.99	34.0	10.0	30.0	8.4	4.00	689.22	3660.48	4492.58	-832.10	2.62	104.57	-727.53
Low-Vol	160	56.80	78.96	34.0	10.0	30.0	8.4	4.00	735.17	4484.93	4826.53	-341.60	2.84	139.05	-202.55
Low-Vol	170	56.80	87.93	34.0	10.0	30.0	8.4	4.00	781.12	4994.42	4872.48	121.95	2.84	164.52	286.47
Med-Vol	80	23.90	7.89	34.0	10.0	30.0	8.4	4.00	367.58	188.57	2353.34	-2164.77	1.20	-26.42	-2191.19
Med-Vol	90	31.70	16.17	34.0	10.0	30.0	8.4	4.00	413.53	512.59	2898.49	-2385.90	1.59	-21.92	-2407.82
Med-Vol	100	39.20	25.14	34.0	10.0	30.0	8.4	4.00	459.48	985.49	3424.44	-2438.95	1.96	-9.53	-2448.48
Med-Vol	110	46.40	34.11	34.0	10.0	30.0	8.4	4.00	505.43	1582.70	3931.19	-2348.48	2.32	9.54	-2338.95
Med-Vol	120	53.30	43.08	34.0	10.0	30.0	8.4	4.00	551.38	2296.16	4418.74	-2122.57	2.67	34.86	-2087.71
Med-Vol	130	59.70	52.05	34.0	10.0	30.0	8.4	4.00	597.32	3107.39	4874.28	-1766.90	2.99	65.82	-1701.08
Med-Vol	140	65.70	61.02	34.0	10.0	30.0	8.4	4.00	643.27	4009.01	5304.23	-1295.22	3.29	101.90	-1193.32
Med-Vol	150	71.00	69.99	34.0	10.0	30.0	8.4	4.00	689.22	4969.29	5689.38	-720.09	3.55	141.96	-578.12
Med-Vol	160	76.30	78.96	34.0	10.0	30.0	8.4	4.00	735.17	6024.65	6074.53	-49.88	3.82	186.78	136.90
Med-Vol	170	76.30	87.93	34.0	10.0	30.0	8.4	4.00	781.12	6709.06	6120.48	588.58	3.82	221.00	809.59
High-Vol	80	35.00	7.89	34.0	10.0	30.0	8.4	4.00	367.58	276.15	3063.74	-2787.59	1.75	-38.69	-2826.29
High-Vol	90	44.40	16.17	34.0	10.0	30.0	8.4	4.00	413.53	717.95	3711.29	-2993.34	2.22	-30.70	-3024.05
High-Vol	100	53.50	25.14	34.0	10.0	30.0	8.4	4.00	459.48	1344.99	4339.64	-2994.65	2.68	-13.00	-3007.65
High-Vol	110	61.70	34.11	34.0	10.0	30.0	8.4	4.00	505.43	2104.59	4910.39	-2805.80	3.09	12.68	-2793.12
High-Vol	120	69.40	43.08	34.0	10.0	30.0	8.4	4.00	551.38	2989.75	5449.14	-2459.38	3.47	45.39	-2414.00
High-Vol	130	76.50	52.05	34.0	10.0	30.0	8.4	4.00	597.32	3981.83	5949.48	-1967.66	3.83	84.34	-1883.32
High-Vol	140	83.20	61.02	34.0	10.0	30.0	8.4	4.00	643.27	5076.86	6424.23	-1347.37	4.16	129.04	-1218.32
High-Vol	150	89.00	69.99	34.0	10.0	30.0	8.4	4.00	689.22	6229.11	6841.38	-612.27	4.45	177.96	-434.31
High-Vol	160	94.60	78.96	34.0	10.0	30.0	8.4	4.00	735.17	7469.62	7245.73	223.89	4.73	231.58	455.47
High-Vol	170	94.60	87.93	34.0	10.0	30.0	8.4	4.00	781.12	8318.18	7291.68	1026.50	4.73	274.01	1300.51

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Isolated Operability

Ketchikan Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	14.10	-163.13	34.0	10.0	30.0	8.4	4.00	367.58	-2300.13	1726.14	-4026.28	0.71	-136.16	-4162.43
Low-Vol	90	19.60	-147.48	34.0	10.0	30.0	8.4	4.00	413.53	-2890.61	2124.09	-5014.70	0.98	-173.93	-5188.63
Low-Vol	100	25.50	-130.69	34.0	10.0	30.0	8.4	4.00	459.48	-3332.60	2547.64	-5880.23	1.28	-204.88	-6085.11
Low-Vol	110	31.30	-113.90	34.0	10.0	30.0	8.4	4.00	505.43	-3565.07	2964.79	-6529.86	1.57	-225.20	-6755.06
Low-Vol	120	37.10	-97.11	34.0	10.0	30.0	8.4	4.00	551.38	-3602.78	3381.94	-6984.72	1.86	-235.79	-7220.51
Low-Vol	130	42.60	-80.32	34.0	10.0	30.0	8.4	4.00	597.32	-3421.63	3779.88	-7201.52	2.13	-234.98	-7436.50
Low-Vol	140	47.70	-63.53	34.0	10.0	30.0	8.4	4.00	643.27	-3030.38	4152.23	-7182.61	2.39	-223.07	-7405.68
Low-Vol	150	52.30	-46.74	34.0	10.0	30.0	8.4	4.00	689.22	-2444.50	4492.58	-6937.08	2.62	-200.68	-7137.76
Low-Vol	160	56.80	-29.95	34.0	10.0	30.0	8.4	4.00	735.17	-1701.16	4826.53	-6527.69	2.84	-170.26	-6697.95
Low-Vol	170	56.80	-13.16	34.0	10.0	30.0	8.4	4.00	781.12	-747.49	4872.48	-5619.96	2.84	-122.57	-5742.54
Med-Vol	80	23.90	-163.13	34.0	10.0	30.0	8.4	4.00	367.58	-3898.81	2353.34	-6252.15	1.20	-230.79	-6482.94
Med-Vol	90	31.70	-147.48	34.0	10.0	30.0	8.4	4.00	413.53	-4675.12	2898.49	-7573.61	1.59	-281.31	-7854.91
Med-Vol	100	39.20	-130.69	34.0	10.0	30.0	8.4	4.00	459.48	-5123.05	3424.44	-8547.49	1.96	-314.95	-8862.44
Med-Vol	110	46.40	-113.90	34.0	10.0	30.0	8.4	4.00	505.43	-5284.96	3931.19	-9216.15	2.32	-333.85	-9550.00
Med-Vol	120	53.30	-97.11	34.0	10.0	30.0	8.4	4.00	551.38	-5175.96	4418.74	-9594.70	2.67	-338.75	-9933.45
Med-Vol	130	59.70	-80.32	34.0	10.0	30.0	8.4	4.00	597.32	-4795.10	4874.28	-9669.39	2.99	-329.31	-9998.69
Med-Vol	140	65.70	-63.53	34.0	10.0	30.0	8.4	4.00	643.27	-4173.92	5304.23	-9478.15	3.29	-307.25	-9785.40
Med-Vol	150	71.00	-46.74	34.0	10.0	30.0	8.4	4.00	689.22	-3318.54	5689.38	-9007.92	3.55	-272.43	-9280.35
Med-Vol	160	76.30	-29.95	34.0	10.0	30.0	8.4	4.00	735.17	-2285.19	6074.53	-8359.71	3.82	-228.71	-8588.42
Med-Vol	170	76.30	-163.13	34.0	10.0	30.0	8.4	4.00	781.12	-12446.8	6120.48	-18567.2	3.82	-736.79	-19304.0
High-Vol	80	35.00	-147.48	34.0	10.0	30.0	8.4	4.00	367.58	-5161.80	3063.74	-8225.54	1.75	-310.59	-8536.13
High-Vol	90	44.40	-130.69	34.0	10.0	30.0	8.4	4.00	413.53	-5802.64	3711.29	-9513.93	2.22	-356.73	-9870.66
High-Vol	100	53.50	-113.90	34.0	10.0	30.0	8.4	4.00	459.48	-6093.65	4339.64	-10433.2	2.68	-384.93	-10818.2
High-Vol	110	61.70	-97.11	34.0	10.0	30.0	8.4	4.00	505.43	-5991.69	4910.39	-10902.0	3.09	-392.13	-11294.2
High-Vol	120	69.40	-80.32	34.0	10.0	30.0	8.4	4.00	551.38	-5574.21	5449.14	-11023.3	3.47	-382.81	-11406.1
High-Vol	130	76.50	-63.53	34.0	10.0	30.0	8.4	4.00	597.32	-4860.05	5949.48	-10809.5	3.83	-357.75	-11167.2
High-Vol	140	83.20	-46.74	34.0	10.0	30.0	8.4	4.00	643.27	-3888.77	6424.23	-10313.0	4.16	-319.24	-10632.2
High-Vol	150	89.00	-29.95	34.0	10.0	30.0	8.4	4.00	689.22	-2665.55	6841.38	-9506.93	4.45	-266.78	-9773.71
High-Vol	160	94.60	-13.16	34.0	10.0	30.0	8.4	4.00	735.17	-1244.94	7245.73	-8490.66	4.73	-204.15	-8694.81
High-Vol	170	94.60	-33.61	34.0	10.0	30.0	8.4	4.00	781.12	-3179.51	7291.68	-10471.1	4.73	-300.88	-10772.0

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Normal Operability

Stikine Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	8.40	59.88	34.0	10.0	30.7	7.5	1.90	328.20	502.99	1278.37	-775.37	0.42	12.26	-763.12
Low-Vol	90	13.70	66.55	34.0	10.0	30.7	7.5	1.90	369.23	911.74	1662.30	-750.57	0.69	24.56	-726.01
Low-Vol	100	18.50	72.74	34.0	10.0	30.7	7.5	1.90	410.25	1345.69	2013.89	-668.20	0.93	38.89	-629.31
Low-Vol	110	23.60	78.93	34.0	10.0	30.7	7.5	1.90	451.28	1862.75	2384.88	-522.13	1.18	56.91	-465.22
Low-Vol	120	28.70	85.12	34.0	10.0	30.7	7.5	1.90	492.30	2442.94	2755.88	-312.93	1.44	78.09	-234.84
Low-Vol	130	33.70	91.31	34.0	10.0	30.7	7.5	1.90	533.33	3077.15	3120.40	-43.25	1.69	102.13	58.87
Low-Vol	140	38.50	97.50	34.0	10.0	30.7	7.5	1.90	574.35	3753.75	3471.99	281.77	1.93	128.59	410.36
Low-Vol	150	43.30	103.69	34.0	10.0	30.7	7.5	1.90	615.38	4489.78	3823.57	666.21	2.17	158.02	824.23
Low-Vol	160	47.30	109.88	34.0	10.0	30.7	7.5	1.90	656.40	5197.32	4123.40	1073.93	2.37	187.26	1261.19
Low-Vol	170	51.56	116.07	34.0	10.0	30.7	7.5	1.90	697.43	5984.57	4440.04	1544.53	2.58	220.08	1764.61
Med-Vol	80	16.60	59.88	34.0	10.0	30.7	7.5	1.90	328.20	994.01	1808.91	-814.90	0.83	24.22	-790.68
Med-Vol	90	23.10	66.55	34.0	10.0	30.7	7.5	1.90	369.23	1537.31	2270.48	-733.17	1.16	41.41	-691.77
Med-Vol	100	29.60	72.74	34.0	10.0	30.7	7.5	1.90	410.25	2153.10	2732.06	-578.95	1.48	62.22	-516.73
Med-Vol	110	36.40	78.93	34.0	10.0	30.7	7.5	1.90	451.28	2873.05	3213.04	-339.99	1.82	87.78	-252.21
Med-Vol	120	42.50	85.12	34.0	10.0	30.7	7.5	1.90	492.30	3617.60	3648.74	-31.13	2.13	115.64	84.51
Med-Vol	130	48.20	91.31	34.0	10.0	30.7	7.5	1.90	533.33	4401.14	4058.55	342.59	2.41	146.07	488.66
Med-Vol	140	53.50	97.50	34.0	10.0	30.7	7.5	1.90	574.35	5216.25	4442.49	773.77	2.68	178.69	952.46
Med-Vol	150	58.40	103.69	34.0	10.0	30.7	7.5	1.90	615.38	6055.50	4800.54	1254.96	2.92	213.13	1468.09
Med-Vol	160	63.00	109.88	34.0	10.0	30.7	7.5	1.90	656.40	6922.44	5139.19	1783.26	3.15	249.42	2032.67
Med-Vol	170	63.00	116.07	34.0	10.0	30.7	7.5	1.90	697.43	7312.41	5180.21	2132.20	3.15	268.92	2401.12
High-Vol	80	28.40	59.88	34.0	10.0	30.7	7.5	1.90	328.20	1700.59	2572.37	-871.77	1.42	41.44	-830.34
High-Vol	90	36.80	66.55	34.0	10.0	30.7	7.5	1.90	369.23	2449.04	3156.87	-707.83	1.84	65.96	-641.87
High-Vol	100	44.80	72.74	34.0	10.0	30.7	7.5	1.90	410.25	3258.75	3715.50	-456.74	2.24	94.17	-362.57
High-Vol	110	52.00	78.93	34.0	10.0	30.7	7.5	1.90	451.28	4104.36	4222.36	-118.00	2.60	125.40	7.40
High-Vol	120	58.40	85.12	34.0	10.0	30.7	7.5	1.90	492.30	4971.01	4677.47	293.54	2.92	158.91	452.45
High-Vol	130	64.30	91.31	34.0	10.0	30.7	7.5	1.90	533.33	5871.23	5100.22	771.01	3.22	194.86	965.87
High-Vol	140	69.60	97.50	34.0	10.0	30.7	7.5	1.90	574.35	6786.00	5484.16	1301.85	3.48	232.46	1534.31
High-Vol	150	74.50	103.69	34.0	10.0	30.7	7.5	1.90	615.38	7724.91	5842.21	1882.70	3.73	271.89	2154.58
High-Vol	160	79.00	109.88	34.0	10.0	30.7	7.5	1.90	656.40	8680.52	6174.39	2506.14	3.95	312.76	2818.90
High-Vol	170	79.00	116.07	34.0	10.0	30.7	7.5	1.90	697.43	9169.53	6215.41	2954.12	3.95	337.21	3291.33

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Difficult Operability

Stikine Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	8.40	-0.98	34.0	10.0	30.7	7.5	1.90	328.20	-8.23	1278.37	-1286.60	0.42	-13.31	-1299.90
Low-Vol	90	13.70	8.88	34.0	10.0	30.7	7.5	1.90	369.23	121.66	1662.30	-1540.64	0.69	-14.95	-1555.59
Low-Vol	100	18.50	17.54	34.0	10.0	30.7	7.5	1.90	410.25	324.49	2013.89	-1689.40	0.93	-12.17	-1701.57
Low-Vol	110	23.60	26.20	34.0	10.0	30.7	7.5	1.90	451.28	618.32	2384.88	-1766.56	1.18	-5.31	-1771.87
Low-Vol	120	28.70	34.86	34.0	10.0	30.7	7.5	1.90	492.30	1000.48	2755.88	-1755.39	1.44	5.97	-1749.42
Low-Vol	130	33.70	43.52	34.0	10.0	30.7	7.5	1.90	533.33	1466.62	3120.40	-1653.78	1.69	21.60	-1632.17
Low-Vol	140	38.50	52.18	34.0	10.0	30.7	7.5	1.90	574.35	2008.93	3471.99	-1463.06	1.93	41.35	-1421.71
Low-Vol	150	43.30	60.84	34.0	10.0	30.7	7.5	1.90	615.38	2634.37	3823.57	-1189.20	2.17	65.25	-1123.94
Low-Vol	160	47.30	69.50	34.0	10.0	30.7	7.5	1.90	656.40	3287.35	4123.40	-836.05	2.37	91.76	-744.28
Low-Vol	170	51.56	78.16	34.0	10.0	30.7	7.5	1.90	697.43	4029.93	4440.04	-410.11	2.58	122.35	-287.76
Med-Vol	80	16.60	-0.98	34.0	10.0	30.7	7.5	1.90	328.20	-16.27	1808.91	-1825.17	0.83	-26.29	-1851.47
Med-Vol	90	23.10	8.88	34.0	10.0	30.7	7.5	1.90	369.23	205.13	2270.48	-2065.35	1.16	-25.20	-2090.55
Med-Vol	100	29.60	17.54	34.0	10.0	30.7	7.5	1.90	410.25	519.18	2732.06	-2212.87	1.48	-19.48	-2232.35
Med-Vol	110	36.40	26.20	34.0	10.0	30.7	7.5	1.90	451.28	953.68	3213.04	-2259.36	1.82	-8.19	-2267.55
Med-Vol	120	42.50	34.86	34.0	10.0	30.7	7.5	1.90	492.30	1481.55	3648.74	-2167.19	2.13	8.84	-2158.35
Med-Vol	130	48.20	43.52	34.0	10.0	30.7	7.5	1.90	533.33	2097.66	4058.55	-1960.89	2.41	30.90	-1929.99
Med-Vol	140	53.50	52.18	34.0	10.0	30.7	7.5	1.90	574.35	2791.63	4442.49	-1650.86	2.68	57.46	-1593.40
Med-Vol	150	58.40	60.84	34.0	10.0	30.7	7.5	1.90	615.38	3553.06	4800.54	-1247.48	2.92	88.01	-1159.48
Med-Vol	160	63.00	69.50	34.0	10.0	30.7	7.5	1.90	656.40	4378.50	5139.19	-760.68	3.15	122.22	-638.46
Med-Vol	170	63.00	78.16	34.0	10.0	30.7	7.5	1.90	697.43	4924.08	5180.21	-256.13	3.15	149.50	-106.63
High-Vol	80	28.40	-0.98	34.0	10.0	30.7	7.5	1.90	328.20	-27.83	2572.37	-2600.20	1.42	-44.99	-2645.18
High-Vol	90	36.80	8.88	34.0	10.0	30.7	7.5	1.90	369.23	326.78	3156.87	-2830.09	1.84	-40.15	-2870.23
High-Vol	100	44.80	17.54	34.0	10.0	30.7	7.5	1.90	410.25	785.79	3715.50	-2929.70	2.24	-29.48	-2959.18
High-Vol	110	52.00	26.20	34.0	10.0	30.7	7.5	1.90	451.28	1362.40	4222.36	-2859.96	2.60	-11.70	-2871.66
High-Vol	120	58.40	34.86	34.0	10.0	30.7	7.5	1.90	492.30	2035.82	4677.47	-2641.64	2.92	12.15	-2629.49
High-Vol	130	64.30	43.52	34.0	10.0	30.7	7.5	1.90	533.33	2798.34	5100.22	-2301.88	3.22	41.22	-2260.67
High-Vol	140	69.60	52.18	34.0	10.0	30.7	7.5	1.90	574.35	3631.73	5484.16	-1852.43	3.48	74.75	-1777.68
High-Vol	150	74.50	60.84	34.0	10.0	30.7	7.5	1.90	615.38	4532.58	5842.21	-1309.63	3.73	112.27	-1197.36
High-Vol	160	79.00	69.50	34.0	10.0	30.7	7.5	1.90	656.40	5490.50	6174.39	-683.88	3.95	153.26	-530.62
High-Vol	170	79.00	78.16	34.0	10.0	30.7	7.5	1.90	697.43	6174.64	6215.41	-40.77	3.95	187.47	146.70

Table B-13. (continued)

Value of Regenerated Timber -- Even-aged Mgt.

Isolated Operability

Stikine Area

Regen Volume Class	Rotation Age (Years)	Sawlog MBF/ac	$/MBF	FS Admin $/MBF	Regen cost $/ac	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Low-Vol	80	8.40	-181.22	34.0	10.0	30.7	7.5	1.90	328.20	-1522.25	1278.37	-2800.61	0.42	-89.01	-2889.62
Low-Vol	90	13.70	-164.17	34.0	10.0	30.7	7.5	1.90	369.23	-2249.13	1662.30	-3911.43	0.69	-133.49	-4044.91
Low-Vol	100	18.50	-148.08	34.0	10.0	30.7	7.5	1.90	410.25	-2739.48	2013.89	-4753.37	0.93	-165.37	-4918.74
Low-Vol	110	23.60	-131.99	34.0	10.0	30.7	7.5	1.90	451.28	-3114.96	2384.88	-5499.84	1.18	-191.97	-5691.82
Low-Vol	120	28.70	-115.90	34.0	10.0	30.7	7.5	1.90	492.30	-3326.33	2755.88	-6082.21	1.44	-210.37	-6292.58
Low-Vol	130	33.70	-99.81	34.0	10.0	30.7	7.5	1.90	533.33	-3363.60	3120.40	-6484.00	1.69	-219.91	-6703.91
Low-Vol	140	38.50	-83.72	34.0	10.0	30.7	7.5	1.90	574.35	-3223.22	3471.99	-6695.21	1.93	-220.26	-6915.46
Low-Vol	150	43.30	-67.63	34.0	10.0	30.7	7.5	1.90	615.38	-2928.38	3823.57	-6751.95	2.17	-212.88	-6964.83
Low-Vol	160	47.30	-51.54	34.0	10.0	30.7	7.5	1.90	656.40	-2437.84	4123.40	-6561.24	2.37	-194.50	-6755.73
Low-Vol	170	51.56	-35.45	34.0	10.0	30.7	7.5	1.90	697.43	-1827.80	4440.04	-6267.84	2.58	-170.53	-6438.38
Med-Vol	80	16.60	-181.22	34.0	10.0	30.7	7.5	1.90	328.20	-3008.25	1808.91	-4817.16	0.83	-175.89	-4993.05
Med-Vol	90	23.10	-164.17	34.0	10.0	30.7	7.5	1.90	369.23	-3792.33	2270.48	-6062.81	1.16	-225.07	-6287.88
Med-Vol	100	29.60	-148.08	34.0	10.0	30.7	7.5	1.90	410.25	-4383.17	2732.06	-7115.22	1.48	-264.59	-7379.82
Med-Vol	110	36.40	-131.99	34.0	10.0	30.7	7.5	1.90	451.28	-4804.44	3213.04	-8017.48	1.82	-296.10	-8313.57
Med-Vol	120	42.50	-115.90	34.0	10.0	30.7	7.5	1.90	492.30	-4925.75	3648.74	-8574.49	2.13	-311.53	-8886.01
Med-Vol	130	48.20	-99.81	34.0	10.0	30.7	7.5	1.90	533.33	-4810.84	4058.55	-8869.39	2.41	-314.53	-9183.92
Med-Vol	140	53.50	-83.72	34.0	10.0	30.7	7.5	1.90	574.35	-4479.02	4442.49	-8921.51	2.68	-306.07	-9227.58
Med-Vol	150	58.40	-67.63	34.0	10.0	30.7	7.5	1.90	615.38	-3949.59	4800.54	-8750.13	2.92	-287.12	-9037.26
Med-Vol	160	63.00	-51.54	34.0	10.0	30.7	7.5	1.90	656.40	-3247.02	5139.19	-8386.21	3.15	-259.06	-8645.26
Med-Vol	170	63.00	-35.45	34.0	10.0	30.7	7.5	1.90	697.43	-2233.35	5180.21	-7413.56	3.15	-208.37	-7621.93
High-Vol	80	28.40	-181.22	34.0	10.0	30.7	7.5	1.90	328.20	-5146.65	2572.37	-7719.01	1.42	-300.93	-8019.94
High-Vol	90	36.80	-164.17	34.0	10.0	30.7	7.5	1.90	369.23	-6041.46	3156.87	-9198.33	1.84	-358.56	-9556.89
High-Vol	100	44.80	-148.08	34.0	10.0	30.7	7.5	1.90	410.25	-6633.98	3715.50	-10349.4	2.24	-400.47	-10749.9
High-Vol	110	52.00	-131.99	34.0	10.0	30.7	7.5	1.90	451.28	-6863.48	4222.36	-11085.8	2.60	-422.99	-11508.8
High-Vol	120	58.40	-115.90	34.0	10.0	30.7	7.5	1.90	492.30	-6768.56	4677.47	-11446.0	2.92	-428.07	-11874.1
High-Vol	130	64.30	-99.81	34.0	10.0	30.7	7.5	1.90	533.33	-6417.78	5100.22	-11518.0	3.22	-419.59	-11937.5
High-Vol	140	69.60	-83.72	34.0	10.0	30.7	7.5	1.90	574.35	-5826.91	5484.16	-11311.0	3.48	-398.18	-11709.2
High-Vol	150	74.50	-67.63	34.0	10.0	30.7	7.5	1.90	615.38	-5038.44	5842.21	-10880.6	3.73	-366.28	-11246.9
High-Vol	160	79.00	-51.54	34.0	10.0	30.7	7.5	1.90	656.40	-4071.66	6174.39	-10246.0	3.95	-324.85	-10570.8
High-Vol	170	79.00	-35.45	34.0	10.0	30.7	7.5	1.90	697.43	-2800.55	6215.41	-9015.96	3.95	-261.29	-9277.25

Uneven-aged Management

A stand consisting of trees of many ages and corresponding sizes is said to be uneven-aged. Timber harvesting under an uneven-aged management regime differs from even-aged management (clearcutting) by the amount of timber removed and the frequency of stand entries. Instead of a rotation age where the entire stand is removed at a certain age, uneven-aged management takes place under a cutting cycle. This cycle, typically five to 25 years in length, allows the uneven-aged stand to grow. At the end of the cycle, certain trees are "plucked" from this area. The remaining stand, the reserve growing stock, is then left to grow to the end of the next cutting cycle. The process then repeats itself. Uneven-aged management on the Tongass uses a ten year cutting cycle. At which time, approximately five percent of the standing timber volume is removed.

Stage II analysis was conducted for the uneven-aged management option. Analyzing the uneven-aged regime is slightly more difficult for there is no clear beginning and end of the stand, there is a continuum of activities and outputs over time. Analysis of uneven-aged management was done in two steps:

1) The economics of one cutting cycle (10 years) was calculated. This assumed that all initial capital investments had been made (e.g., new road construction) since those expenses will occur only once, not for every cutting cycle. Results in Table B-14.

2) Then the economics of each cutting cycle for 100, 200 and 1000 years was determined and applied to initial capital investment costs. Results of this analysis are found in Table B-15.

Together, this analysis shows the economic viability of applying uneven-aged management to one acre of land.

The first table, Table B-14, shows the economics of one ten-year cutting cycle. The land was stratified into components which impact the costs and values of managing through an uneven-aged system. These components are:

Operability - This component is a primary factor in determining the logging cost. Normal operability is standard cable and tractor, difficult requires high-lead cable systems, and isolated requires the use of helicopter logging.

Volume Class - Volume class for existing old-growth stands is sub-divided into four classes:

Strata A - 8-20 MBF/acre

Strata B - 20-30 MBF/acre
Strata C - 30-50 MBF/acre
Strata D - 50+ MBF/acre

The volumes used in the analysis have been statistically adjusted to account for unstocked areas within each strata and the reliability of inventory data.

MBF/ac - This is the merchantable sawlog volume in MBF (thousands of board feet) per acre.

$/MBF - This is the value of each MBF of sawlog timber less logging costs (temporary roads, felling, bucking, skidding). This is the value of the timber at the landing.

FS admin $/MBF - This is the cost to the Forest Service to administer the timber sale.

Regen cost $/acre - This is the cost to the Forest Service to certify that the stand, once harvested, has successfully regenerated.

Haul cost $/MBF - This is the cost of transporting the logs from the landing to the mill site. It is dependent upon the distance the logs must be moved and the mode of transportation required (truck, tug, etc.)

Road miles per 1000 acres - This is the number of road miles required to access 1000 acres of suitable timber. If the area is currently roaded then this many miles of road must be reconstructed to access 1000 acres. If the area is in an unroaded condition then this many miles of new construction must take place to access 1000 aces. Road reconstruction costs $52,638 per mile and new road construction costs $224,500 per mile. The costs appear high but a large portion is Forest Service engineering support costs. These costs were derived by taking a three year average of actual costs (1984-1987). These costs were then re-checked in 1990 and found still valid in 1990 dollars.

LTF cost $/ac - Log Transfer Facilities (LTF) are used to place the logs into the water for transportation by log raft or barge. Construction, or reconstruction, of these facilities is takes place when an area is scheduled for harvest. For modeling purposes, total LTF cost of an area was divided by the total number of tentatively suitable acres. This "per acre" value would then be applied to every acre receiving a timber management prescription.

Sawlog Total Revenue - This is the total value of one acre of sawtimber at the landing. It is obtained by multiplying the MBF/ac by the $/MBF value.

Sawlog Total Costs - Sum of Forest Service administrative costs, haul costs, road costs, and LTF costs.

Net Sawlog Revenue - This is the difference between total sawlog revenue and total sawlog costs.

Utility Volume MBF/ac - Utility volume is those logs that have less than 33 1/3 percent net sawlog volume (the volume that can be used for industrial wood products) but contain at least 50 percent firm usable pulp chips. Utility volume forest-wide 1980-90 averaged 14 percent of the total harvest volume.

Net Utility Revenue - This is the net revenue obtained from the utility volume. The values shown on the table may appear unusual at times when this value is positive when sawlog revenue is negative but there is an explanation. The net sawlog volume is less all sale preparation, roading, LTF costs while net utility revenue is less only haul costs. This was done for accounting purposes only.

Total Net Revenue - This is the sum of the net sawlog and net utility revenues. It represents the the financial return expected off an acre of forest land given the land characteristics, costs, values, and rotation age.

Table B-14.

Uneven-aged Management

Value of One Cutting Cycle (10 Years)

Chatham Area

Opera-bility	Volume Class	MBF/ac	$/MBF	FS Admin $/MBF	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Normal	Strata A	0.73	89.89	44.0	37.1	8.8	4.52	48.14	65.62	111.86	-46.24	0.19	10.25	-35.99
Normal	Strata B	0.90	125.13	44.0	37.1	8.8	4.52	48.14	112.62	125.65	-13.03	0.24	21.07	8.05
Normal	Strata C	1.05	158.44	44.0	37.1	8.8	4.52	48.14	166.36	137.81	28.55	0.28	33.89	62.44
Normal	Strata D	1.05	296.25	44.0	37.1	8.8	4.52	48.14	311.06	137.81	173.25	0.28	72.38	245.63
Dffclt	Strata A	0.73	19.39	44.0	37.1	8.8	4.52	48.14	14.15	111.86	-97.70	0.19	-3.44	-101.14
Dffclt	Strata B	0.90	80.51	44.0	37.1	8.8	4.52	48.14	72.46	125.65	-53.19	0.24	10.39	-42.79
Dffclt	Strata C	1.05	126.10	44.0	37.1	8.8	4.52	48.14	132.41	137.81	-5.41	0.28	24.86	19.45
Dffclt	Strata D	1.05	274.23	44.0	37.1	8.8	4.52	48.14	287.94	137.81	150.13	0.28	66.23	216.36
Isolat	Strata A	0.73	-192.22	44.0	37.1	8.8	4.52	48.14	-140.32	111.86	-252.18	0.19	-44.53	-296.71
Isolat	Strata B	0.90	-53.36	44.0	37.1	8.8	4.52	48.14	-48.02	125.65	-173.67	0.24	-21.66	-195.33
Isolat	Strata C	1.05	29.10	44.0	37.1	8.8	4.52	48.14	30.56	137.81	-107.26	0.28	-2.23	-109.49
Isolat	Strata D	1.05	208.15	44.0	37.1	8.8	4.52	48.14	218.56	137.81	80.75	0.28	47.77	128.52

Table B-14.
Uneven-aged Management
Value of One Cutting Cycle (10 Years)
Ketchikan Area

Operability	Volume Class	MBF/ac	$/MBF	FS Admin $/MBF	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Normal	Strata A	0.76	51.80	44.0	30.0	8.4	4.00	45.95	39.37	106.19	-66.82	0.10	2.25	-64.57
Normal	Strata B	0.94	129.89	44.0	30.0	8.4	4.00	45.95	122.10	119.51	2.59	0.13	12.77	15.36
Normal	Strata C	1.13	156.95	44.0	30.0	8.4	4.00	45.95	177.35	133.57	43.79	0.15	19.51	63.30
Normal	Strata D	1.13	281.68	44.0	30.0	8.4	4.00	45.95	318.30	133.57	184.73	0.15	38.68	223.41
Dffclt	Strata A	0.76	-31.01	44.0	30.0	8.4	4.00	45.95	-23.57	106.19	-129.76	0.10	-6.31	-136.06
Dffclt	Strata B	0.94	88.83	44.0	30.0	8.4	4.00	45.95	83.50	119.51	-36.01	0.13	7.52	-28.49
Dffclt	Strata C	1.13	123.50	44.0	30.0	8.4	4.00	45.95	139.56	133.57	5.99	0.15	14.37	20.36
Dffclt	Strata D	1.13	252.75	44.0	30.0	8.4	4.00	45.95	285.61	133.57	152.04	0.15	34.23	186.27
Isolat	Strata A	0.76	-279.47	44.0	30.0	8.4	4.00	45.95	-212.40	106.19	-318.59	0.10	-31.99	-350.57
Isolat	Strata B	0.94	-34.34	44.0	30.0	8.4	4.00	45.95	-32.28	119.51	-151.79	0.13	-8.23	-160.01
Isolat	Strata C	1.13	23.15	44.0	30.0	8.4	4.00	45.95	26.16	133.57	-107.41	0.15	-1.05	-108.46
Isolat	Strata D	1.13	165.97	44.0	30.0	8.4	4.00	45.95	187.55	133.57	53.98	0.15	20.90	74.87

Table B-14.
Uneven-aged Management
Value of One Cutting Cycle (10 Years)
Stikine Area

Operability	Volume Class	MBF/ac	$/MBF	FS Admin $/MBF	Haul cost $/MBF	Road miles/ 1000 ac	LTF cost $/ac	Road Maint.	Sawlog Total Revenue	Sawlog Total Costs	NET SAWLOG REVENUE	Util. Volume MBF/ac	NET UTILITY REVENUE	TOTAL NET REVENUE
Normal	Strata A	0.63	81.21	44.0	30.7	7.5	1.90	41.03	51.16	89.99	-38.82	0.17	8.46	-30.36
Normal	Strata B	0.81	128.02	44.0	30.7	7.5	1.90	41.03	103.70	103.43	0.26	0.22	20.97	21.23
Normal	Strata C	0.94	136.43	44.0	30.7	7.5	1.90	41.03	128.24	113.14	15.10	0.25	26.44	41.54
Normal	Strata D	0.94	283.53	44.0	30.7	7.5	1.90	41.03	266.52	113.14	153.38	0.25	63.22	216.59
Dffclt	Strata A	0.63	9.60	44.0	30.7	7.5	1.90	41.03	6.05	89.99	-83.94	0.17	-3.54	-87.47
Dffclt	Strata B	0.81	85.57	44.0	30.7	7.5	1.90	41.03	69.31	103.43	-34.12	0.22	11.82	-22.30
Dffclt	Strata C	0.94	95.27	44.0	30.7	7.5	1.90	41.03	89.55	113.14	-23.59	0.25	16.15	-7.44
Dffclt	Strata D	0.94	255.99	44.0	30.7	7.5	1.90	41.03	240.63	113.14	127.49	0.25	56.33	183.82
Isolat	Strata A	0.63	-205.23	44.0	30.7	7.5	1.90	41.03	-129.29	89.99	-219.28	0.17	-39.54	-258.82
Isolat	Strata B	0.81	-41.80	44.0	30.7	7.5	1.90	41.03	-33.86	103.43	-137.29	0.22	-15.62	-152.91
Isolat	Strata C	0.94	-28.22	44.0	30.7	7.5	1.90	41.03	-26.53	113.14	-139.67	0.25	-14.73	-154.40
Isolat	Strata D	0.94	173.36	44.0	30.7	7.5	1.90	41.03	162.96	113.14	49.82	0.25	35.67	85.49

Long-term Value of Uneven-aged Management

Table B-15 uses the value of each cutting cycle and the capital expenditures required to initiate management to calculate the long-term value of uneven-aged management per acre. The following information is used:

Operability - This component is a primary factor in determining the logging cost. Normal operablity is standard cable and tractor, difficult requires long span skyline systems, and isolated requires the use of helicopter logging techniques.

Volume Class - Volume class for existing old-growth stands is sub-divided into four classes:

Strata A - 8-20 MBF/acre
Strata B - 20-30 MBF/acre
Strata C - 30-50 MBF/acre
Strata D - 50+ MBF/acre

The volumes used in the analysis have been statistically adjusted to account for unstocked areas within each strata and the reliability of inventory data.

10 yr Cutting Cycle Revenue - This value is obtained from Table B-14. It is the per acre net revenue received from one ten year cutting cycle.

Initial Capital Investment ($/acre) - To initiate any timber management, facilities must be constructed. New roads and LTF construction takes place at the onset of management. After this, the maintenance costs of these facilities is calculated into each ten-year cutting cycle. The value listed below is the cost of initial road and LTF construction, not maintenance.

Total Net Rev @100, 200, and 1000 years - These values were obtained by multiplying the ten-year cutting cycle by the appropriate number of decades and subtracting teh initial capital investment costs. This shows how many decades may be required before the management starts producing positive returns.

Table B-15.
Long-term Value of Uneven-aged Management
Chatham Area

Opera-bility	Volume Class	10 yr Cutting Cycle Revenue	Initial Capital Investment ($/acre)	Total Net Rev @100 yrs	Total Net Rev @200 yrs	Total Net Rev @1000 yrs
Normal	Strata A	-35.99	2160.63	-2520.52	-2880.40	-5759.48
Normal	Strata B	8.05	2160.63	-2080.18	-1999.72	-1356.09
Normal	Strata C	62.44	2160.63	-1536.22	-911.80	4083.50
Normal	Strata D	245.63	2160.63	295.69	2752.01	22402.58
Dffclt	Strata A	-101.14	2160.63	-3172.06	-4183.49	-12274.95
Dffclt	Strata B	-42.79	2160.63	-2588.58	-3016.52	-6440.09
Dffclt	Strata C	19.45	2160.63	-1966.11	-1771.60	-215.46
Dffclt	Strata D	216.36	2160.63	2.98	2166.59	19475.46
Isolat	Strata A	-296.71	2160.63	-5127.72	-8094.81	-31831.53
Isolat	Strata B	-195.33	2160.63	-4113.89	-6067.15	-21693.24
Isolat	Strata C	-109.49	2160.63	-3255.53	-4350.44	-13109.67
Isolat	Strata D	128.52	2160.63	-875.42	409.79	10691.45

Ketchikan Area

Opera-bility	Volume Class	10 yr Cutting Cycle Revenue	Initial Capital Investment ($/acre)	Total Net Rev @100 yrs	Total Net Rev @200 yrs	Total Net Rev @1000 yrs
Normal	Strata A	-64.57	2061.79	-2707.46	-3353.13	-8518.47
Normal	Strata B	15.36	2061.79	-1908.20	-1754.62	-525.94
Normal	Strata C	63.30	2061.79	-1428.84	-795.89	4267.73
Normal	Strata D	223.41	2061.79	172.30	2406.38	20279.07
Dffclt	Strata A	-136.06	2061.79	-3422.41	-4783.02	-15667.95
Dffclt	Strata B	-28.49	2061.79	-2346.66	-2631.53	-4910.49
Dffclt	Strata C	20.36	2061.79	-1858.23	-1654.67	-26.18
Dffclt	Strata D	186.27	2061.79	-199.07	1663.64	16565.38
Isolat	Strata A	-350.57	2061.79	-5567.51	-9073.23	-37118.99
Isolat	Strata B	-160.01	2061.79	-3661.92	-5262.05	-18063.07
Isolat	Strata C	-108.46	2061.79	-3146.40	-4231.01	-12907.91
Isolat	Strata D	74.87	2061.79	-1313.05	-564.31	5425.61

Table B-15. (continued)
Long-term Value of Uneven-age Management
Stikine Area

Operability	Volume Class	10 yr Cutting Cycle Revenue	Initial Capital Investment ($/acre)	Total Net Rev @100 yrs	Total Net Rev @200 yrs	Total Net Rev @1000 yrs
Normal	Strata A	-30.36	1837.55	-2141.14	-2444.73	-4873.47
Normal	Strata B	21.23	1837.55	-1625.22	-1412.89	285.73
Normal	Strata C	41.54	1837.55	-1422.17	-1006.79	2316.24
Normal	Strata D	216.59	1837.55	328.38	2494.31	19821.73
Dffclt	Strata A	-87.47	1837.55	-2712.29	-3587.03	-10584.94
Dffclt	Strata B	-22.30	1837.55	-2060.53	-2283.51	-4067.35
Dffclt	Strata C	-7.44	1837.55	-1911.99	-1986.43	-2581.96
Dffclt	Strata D	183.82	1837.55	0.64	1838.83	16544.36
Isolat	Strata A	-258.82	1837.55	-4425.73	-7013.91	-27719.35
Isolat	Strata B	-152.91	1837.55	-3366.66	-4895.77	-17128.64
Isolat	Strata C	-154.40	1837.55	-3381.57	-4925.59	-17277.77
Isolat	Strata D	85.49	1837.55	-982.69	-127.83	6711.06

Formulation of Alternatives

Introduction

A Forest Plan alternative is a mix of management prescriptions applied in specific amounts to areas of the Forest to achieve desired management objectives and goals. Each alternative within the range of alternatives was developed to meet the following National Forest Management Act (NFMA) requirements (CFR 219.12(f)):

- Be distributed between the minimum and maximum resource potentials of the Forest.

- Be formulated to facilitate analysis of opportunity costs, resource use, and environmental trade-offs among alternatives.

- Address and respond differently to major public issues, management concerns, and resource opportunities.

- Represent the most cost efficient combination of management prescriptions to meet the objectives of the alternative.

- State the condition and uses that will result from long-term implementation.

- State what goods and services will be produced, including timing and flow of outputs, and the costs and benefits generated.

- State the resource management standards and guidelines.

- State the purposes of the proposed management direction.

These regulations also require that alternative development processes follow the National Environmental Policy Act (NEPA) procedures contained in 40 CFR 1502.14.

Alternative Development. The alternative development process began in 1988 with a review of Forest issues, concerns, opportunities, and resource inventories; resource production capabilities identified in the analysis of the management situation; and applicable planning direction. Based on a review of these items, resource management options were developed. These management options were designed to incorporate issues, reflect a particular level of management emphasis, and serve as a potential building block for Forest management alternatives.

Land Area Development and Management Prescriptions. The identification of land areas which contribute to the goals

and objectives of each alternative was an integral part of alternative development. Working from the management options developed earlier, areas of the Forest were identified and assigned a management strategy. These "Land Use Designations," or LUDs are portions of the forest managed for the same goals and objectives. They are physical units and can be delineated on a map.

The next phase was to develop a range of silvicultural activities that can occur within the LUD areas over the planning horizon. Silvicultural prescriptions represent the potential sets of timber management activities that can be implemented. These prescriptions incorporated into the FORPLAN model, which seeks to schedule activities in a manner consistent with management constraints and objectives.

Iterative Process. The analysis began with a series of tests designed to calibrate and verify the operation of the models. Upon completion, analysis of individual alternatives began. Under their particular constraints, each model was then solved using an objective function to maximize timber harvest volume in the first decade of the planning horizon.

Description of Standard Model Shell

A standard FORPLAN model shell was developed to ease the task of developing the individual models used to analyze alternatives. A description of what is in the model shell is found in this appendix, The Forest Planning Model. The shell has a standard set of identifiers, treatment types, activities, outputs, cost and value data, objective functions, prescriptions, and yield data. Constraints and analysis areas unique to each alternative are then added to customize the the model.

Description of Common Model Constraints

Constraints are a tool by which the model can be manipulated in order to provide an accurate mathematical representation of the alternative. Several sets of constraints were applied to the standard model shell during the analysis of alternatives. These common constraints fall into four categories: 1) Congressionally and Administratively removed, 2) Management Requirements, 3) timber policy constraints, and 4) operational constraints. Other constraint sets, such as visual and discretionary constraints, were modeled for all alternatives, but the amount and extent of the constraints varied by alternative.

Congressionally and Administratively removed areas. In FORPLAN, all lands identified as not suitable for timber harvest are designated to non-timber prescriptions. As are

all lands congressionally (e.g., wilderness) or administratively withdrawn from timber harvest.

Management Requirement (MRs) constraints. These constraints are incorporated into the FORPLAN model so management requirements and standards are achieved. Procedures for defining the MRs are established by the planning team. The MRs are taken from 36 CFR 219.27 and generally represent requirements that are outside of Forest Service authority to change. They are based on statutes and regulations in contrast to manual direction or or agency policy. MRs apply to all benchmarks and alternatives.

Timber Policy constraints. These are required to ensure that all timber harvest meets sustained yield, culmination of mean annual increment, and dispersion requirements. These constraints are in all benchmarks and alternatives.

Operational constraints. These constraints are needed to ensure that the results obtained from FORPLAN are minimally acceptable and implementable on the ground. These constraints are within agency control, but there is little discretionary control regarding their application at the Forest level. These constraints apply to all alternatives but not to the benchmarks.

Development and Testing of Alternatives

Introduction

This section describes the methods applied in the formulation and analysis of alternatives. Alternatives were developed to meet a variety of issues, concerns, and objectives. In all, five alternatives were developed. These range from a non-market (Alternative A) to a market emphasis (Alternative D). These alternative themes and corresponding land allocative patterns were developed by the Tongass Land Management Team following and based on the analysis of the management situation and public comment.

Alternative Themes

The theme and land allocations of each alternative is discussed below. The themes of these alternatives have been developed to meet a wide-range of National Forest issues, concerns, and objectives. The land allocations have been determined for each alternative with accordance with the respective themes.

Theme of the Alternative A

The theme of this alternative is to emphasize high-quality fish and wildlife habitat, unroaded areas, wild, scenic, and recreation rivers, scenic quality, subsistence use, and a

wide range of recreation and tourism opportunities in a natural setting. Timber harvest and mining may occur at levels compatible with the non-market emphasis of this alternative.

Theme of the Alternative B.

The theme of this alternative is to emphasize resource uses that contribute to the local and regional economies of Southeast Alaska, such as timber harvesting, commercial fishing, mining, recreation, and tourism. Non-market values such as wildlife habitat, visual quality, roadless area opportunities, and wild, scenic, and recreation rivers will be emphasized in selected areas. Opportunities for local residents to pursue traditional lifestyles, including subsistence use and recreation, will also be emphasized.

Theme of the Alternative C.

The theme of this alternative is to continue the Land Use Designations, resource outputs and activities, and management direction of the current Tongass Land Management Plan (as approved in 1979, amended in 1986, and amended by the Tongass Timber Reform Act of 1990). Timber harvest levels that contribute to maintaining local employment are emphasized, along with maintaining the variety of recreation opportunities and scenic quality currently available. Opportunities for local residents to pursue traditional lifestyles, including subsistence use and recreation, will continue.

Theme of the Alternative D.

The theme of this alternative is to provide an economic timber supply from public lands to meet predicted demand and the existing mill capacity in southeast Alaska. Management of other resources will be done in an efficient manner consistent with the emphasis on timber supply, and meeting environmental standards. Some areas with low timber volumes will be managed for recreation, visual quality and other non-commodity values. Areas in and around communities will be managed to provide for recreation and related traditional uses, including subsistence.

Theme of Alternative P

The theme of this alternative is to enhance the balanced use of resources of the forest and provide a public timber supply to maintain the southeast Alaska timber industry. An important component of this alternative is the existing 10-year timber schedule. The timber volume scheduled for harvest and the location of the timber sales is incorporated into the constraint section of this alternative. Many of the most important wildlife habitats, recreation and subsistence opportunities and scenic values will be

maintained in a natural setting. Minerals development is encouraged in selected areas. Resources that will contribute to the local and regional economies of southeast Alaska are emphasized.

Alternative Flowcharting

Once an alternative's theme, goals and resource objectives, and range of management intensities was determined, the process of allocating land to Land Use Designations (LUDs) was interpreted into a flowchart or sometimes called a "decision tree". Every 20-acre capability area (Appendix B, The Forest Planning Model (FORPLAN)) flows through this chart until it is allocated to the appropriate LUD consistent with the theme, goals and resource objectives of each alternative.

The flowchart is made up of a series of "question" or decision nodes. Each node essentially asks a yes-or-no question regarding an aspect of the land's attributes. For instance, a piece of a flowchart may look like the following:

```
                  |
       (Land comes into node)
                  |
                  V
      _______________________
     |Is this piece of land  |
     |in an eagle buffer or  |     (Question is asked)
     |beach fringe area?     |
     |_______________________|
       |                   |
      YES                  NO      (Decision is made)
       |                   |
       V                   V
  Allocate to      (On to next node)
  Beach fringe
  Land Use
  Designation
    (done)
```

This process continues until all capability areas have been allocated to a Land Use Designation. There is a separate flowchart for each alternative. All lands pass through the flowchart for LUD allocation.

The flowchart is a symbolic representation of the LUD allocation process. These flowcharts also aid in the design of the computer program (in ARC-INFO) that formats the allocation decisions into FORPLAN inputs. Flowcharts for each alternative are available in the planning records. Due to their size, inclusion into this document was not possible.

The allocative patterns for each alternative generated by the flowcharts were then reviewed by supervisor and ranger

district personnel. Adjustments were made were necessary to account for local knowledge, again, though, consistent with the theme of each alternative.

Land Allocations for Alternative A

6,000 acres of tentatively suitable timber were allocated to Research Natural areas with no scheduled timber harvest allowed.

339,000 acres of tentatively suitable timber were allocated to Primitive Recreation with no scheduled timber harvest allowed.

187,000 acres of tentatively suitable timber were allocated to Old Growth with no scheduled timber harvest allowed.

161,000 acres of tentatively suitable timber were allocated to Beach Fringe with no scheduled timber harvest allowed.

489,000 acres of tentatively suitable timber were allocated to Semi-Primitive Recreation with no scheduled timber harvest allowed.

27,000 acres of tentatively suitable timber were allocated to Special Areas with no scheduled timber harvest allowed.

95,000 acres of tentatively suitable timber were allocated to Wild & Scenic Rivers with no scheduled timber harvest allowed.

4,000 acres of tentatively suitable timber were allocated to Other Areas with no scheduled timber harvest allowed.

The Scenic Viewshed Land Use Designation caused 323,000 acres to be sent to reduced intensity timber harvest, and 57,000 acres to be sent to individual tree selection.

The Modified Landscape Land Use Designation caused 251,000 acres to be sent to reduced intensity timber harvest.

The Stream and Lake Protection Land Use Designation caused 46,000 acres to be sent to reduced intensity timber harvest.

Land Allocations for Alternative B

10,000 acres of tentatively suitable timber were allocated to Research Natural areas with no scheduled timber harvest allowed.

362,000 acres of tentatively suitable timber were allocated to Primitive Recreation with no scheduled timber harvest allowed.

7,000 acres of tentatively suitable timber were allocated to Old Growth with no scheduled timber harvest allowed.

153,000 acres of tentatively suitable timber were allocated to Beach Fringe with no scheduled timber harvest allowed.

479,000 acres of tentatively suitable timber were allocated to Semi-Primitive Recreation with no scheduled timber harvest allowed.

33,000 acres of tentatively suitable timber were allocated to Special Areas with no scheduled timber harvest allowed.

56,000 acres of tentatively suitable timber were allocated to Wild & Scenic Rivers with no scheduled timber harvest allowed.

4,000 acres of tentatively suitable timber were allocated to Other Areas with no scheduled timber harvest allowed.

The Scenic Viewshed Land Use Designation caused 347,000 acres to be sent to reduced intensity timber harvest, and 50,000 acres to be sent to individual tree selection.

The Modified Landscape Land Use Designation caused 128,000 acres to be sent to reduced intensity timber harvest.

The Stream and Lake Protection Land Use Designation caused 54,000 acres to be sent to reduced intensity timber harvest.

Land Allocations for Alternative C

4,000 acres of tentatively suitable timber were allocated to Research Natural areas with no scheduled timber harvest allowed.

155,000 acres of tentatively suitable timber were allocated to Primitive Recreation with no scheduled timber harvest allowed.

58,000 acres of tentatively suitable timber were allocated to Old Growth with no scheduled timber harvest allowed.

263,000 acres of tentatively suitable timber were allocated to Beach Fringe with no scheduled timber harvest allowed.

124,000 acres of tentatively suitable timber were allocated to Semi-Primitive Recreation with no scheduled timber harvest allowed.

1,000 acres of tentatively suitable timber were allocated to Special Areas with no scheduled timber harvest allowed.

The Scenic Viewshed Land Use Designation caused 183,000 acres to be sent to reduced intensity timber harvest, and 35,000 acres to be sent to individual tree selection.

The Modified Landscape Land Use Designation caused 217,000 acres to be sent to reduced intensity timber harvest.

The Stream and Lake Protection Land Use Designation caused 72,000 acres to be sent to reduced intensity timber harvest.

Land Allocations for Alternative D

132,000 acres of tentatively suitable timber were allocated to Primitive Recreation with no scheduled timber harvest allowed.

9,000 acres of tentatively suitable timber were allocated to Old Growth with no scheduled timber harvest allowed.

403,000 acres of tentatively suitable timber were allocated to Semi-Primitive Recreation with no scheduled timber harvest allowed.

2,000 acres of tentatively suitable timber were allocated to Special Areas with no scheduled timber harvest allowed.

8,000 acres of tentatively suitable timber were allocated to Wild & Scenic Rivers with no scheduled timber harvest allowed.

5,000 acres of tentatively suitable timber were allocated to Other Areas with no scheduled timber harvest allowed.

The Scenic Viewshed Land Use Designation caused 48,000 acres to be sent to reduced intensity timber harvest, and 15,000 acres to be sent to individual tree selection.

The Modified Landscape Land Use Designation caused 144,000 acres to be sent to reduced intensity timber harvest.

Land Allocations for Alternative P.

4,000 acres of tentatively suitable timber were allocated to Research Natural areas with no scheduled timber harvest allowed.

161,000 acres of tentatively suitable timber were allocated to Primitive Recreation with no scheduled timber harvest allowed.

45,000 acres of tentatively suitable timber were allocated to Old Growth with no scheduled timber harvest allowed.

213,000 acres of tentatively suitable timber were allocated to Beach Fringe with no scheduled timber harvest allowed.

188,000 acres of tentatively suitable timber were allocated to Semi-Primitive Recreation with no scheduled timber harvest allowed.

27,000 acres of tentatively suitable timber were allocated to Special Areas with no scheduled timber harvest allowed.

34,000 acres of tentatively suitable timber were allocated to Wild & Scenic Rivers with no scheduled timber harvest allowed.

33,000 acres of tentatively suitable timber were allocated to Other Areas with no scheduled timber harvest allowed.

The Scenic Viewshed Land Use Designation caused 222,000 acres to be sent to reduced intensity timber harvest, and 52,000 acres to be sent to individual tree selection.

The Modified Landscape Land Use Designation caused 251,000 acres to be sent to reduced intensity timber harvest.

The Stream and Lake Protection Land Use Designation caused 67,000 acres to be sent to reduced intensity timber harvest.

Analysis Of Constraints on Alternatives

Introduction

The purpose of identifying and estimating the effects of constraints on alternatives was to find the most efficient means of addressing planning issues. Many constraints were considered for incorporation into the models. The purpose of these constraints is to act as proxies to facilitate model solutions that are realistic, implementable, and consistent with the intent of the standards and guidelines.

Sensitivity Tests on Alternatives

Prior to final selection of the constraint sets and subsequent model solving, sensitivity testing of constraints and certain assumptions were conducted on each alternative. The following discussion outlines the different constraints and assumptions tested for each alternative and the results.

Alternative A

Seven different sensitivity tests were performed on Alternative A. The only constraint these sensitivity tests had in common was proportional harvest of volume class 6 and 7 combined on the long term sale management areas of allotments B, H, A-1, and Kuiu Island for APC until 2011 and allotments E, F, and G for KPC until 2004. The following displays those items which were unique to each of the sensitivity tests. Results in Table B-16.

<u>A1</u> Maximum Timber harvest objective function.

<u>A2</u> Maximum Present Net Value objective function assuming middle market timber values.

<u>A3</u> Maximum Present Net Value assuming high market timber values.

<u>A4</u> Maximum Present Net Value assuming low market timber values.

<u>A5</u> Maximum timber harvest with a decadal no-below-cost timber program.

<u>A6</u> Maximum Present Net Value with a mandatory 420 MMBF first decade allowable sale quantity.

<u>A7</u> Maximum Present Net Value with a decadal no below cost timber program and non-declining net timber revenue for 16 decades.

Table B-16
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 1)
Alternative A

FORPLAN RUN	ASQ (MMBF)	UTILITY VOLUME (MMBF)	TENTATIVE SUITABLE ACRES AVAILABLE (MACRES)	TENTATIVE SUITABLE ACRES SCHEDULED (MACRES & %)	MILES OF ROAD CONSTRUCTION & MMBF/MILE 1ST DECADE (MILES/YEAR)	AVERAGE LOGGING COST DECADE 1 ($/MBF)	PNV AFTER 160 YEARS (MM$)	TIMBER PROGRAM COST DECADE 1 (M$/YEAR)	TIMBER PROGRAM REVENUE DECADE 1 (M$/YEAR)	NET TEMBER REVENUE DECADE 1 (M$/YEAR)	NET TIMBER REVENUE DECADE 5 / 10 (M$/YEAR)	CAPITAL INVESTMENT NEEDS DECADE 1 (M$/YEAR)
MAXIMUM TIMBER												
CHATHAM	63.5	16.9	264.2	256.5 97%	35.9 1.8/mi	124.7	-18.7	10,342	9,727	-615	-433/ -2,060	0
KETCHIKAN	162.0	22.0	611.5	591.9 97%	65.2 2.5/mi	113.7	211.8	20,358	32,583	12,225	4,159/ -438	0
STIKINE	115.3	30.7	384.3	376.2 97%	41.4 2.8/mi	119.2	104.8	13,367	20,929	7,562	2,887/ -1,933	0
TONGASS TOTAL	**340.8**	**69.6**	**1,260.0**	**1,224.6 97%**	**142.5 2.4/mi**	**117.6**	**297.9**	**44,067**	**63,239**	**19,172**	**6,613/ -4,431**	**0**
MAXIMUM PNV MIDDLE MARKET												
CHATHAM	29.5	7.8	264.2	124.9 47%	10.7 2.8/mi	120.6	32.8	3,456	4,775	1,319	1,630/ -239	0
KETCHIKAN	122.1	16.7	611.5	445.0 73%	36.6 3.3/mi	111.8	270.7	12,561	33,235	20,674	6,592/ 57	0
STIKINE	83.2	22.1	384.3	268.7 70%	22.3 3.7/mi	118.2	138.6	7,898	16,039	8,141	4,567/ -689	0
TONGASS TOTAL	**234.8**	**46.6**	**1,260.0**	**838.6 67%**	**69.6 3.4/mi**	**115.7**	**442.1**	**23,915**	**54,049**	**30,134**	**12,789/ -871**	**0**
MAXIMUM PNV HIGH MARKET												
CHATHAM	64.8	17.2	264.2	259.5 98%	37.5 1.7/mi	126.2	321.7	10,761	24,198	13,437	12,132/ 11,818	0
KETCHIKAN	163.6	22.2	611.5	599.5 98%	66.8 2.4/mi	113.8	1,031.1	20,775	65,334	44,559	33,826/ 53,145	0
STIKINE	116.2	30.9	384.3	379.4 99%	42.2 2.8/mi	119.1	731.3	13,574	46,715	33,141	26,382/ 22,317	0
TONGASS TOTAL	**344.6**	**70.3**	**1,260.0**	**1,238.4 98%**	**146.5 2.3/mi**	**117.9**	**8,084.1**	**45,110**	**136,247**	**90,937**	**72,340/ 87,280**	**0**
MAXIMUM PNV LOW MARKET												
CHATHAM	.1	0.0	264.2	.8 0%	0.0 0.0/mi	88.0	0.0	13	13	0	6/ -12	0
KETCHIKAN	7.4	1.0	611.5	48.6 8%	1.7 4.4/mi	101.5	4.0	644	693	49	326/ -1,294	0
STIKINE	1.8	.5	384.3	19.5 5%	.6 3.0/mi	99.3	1.1	197	194	-2	10/ -373	0
TONGASS TOTAL	**9.3**	**1.5**	**1,260.0**	**68.9 5%**	**2.3 4.0/mi**	**100.9**	**5.1**	**854**	**900**	**47**	**342/ -1,679**	**0**
MAXIMUM TIMBER NO BELOW COST												
CHATHAM	44.2	11.7	264.2	192.0 73%	22.5 2.0/mi	123.5	10.0	6,654	6,654	0	0/ 0	0
KETCHIKAN	161.8	22.0	611.5	592.0 97%	66.5 2.4/mi	113.6	190.1	20,660	32,936	12,276	0/ 370	0
STIKINE	108.5	28.9	384.3	380.6 99%	43.1 2.5/mi	126.4	54.1	13,513	18,482	4,969	0/ 0	0
TONGASS TOTAL	**314.5**	**62.6**	**1,260.0**	**1,064.6 84%**	**132.1 2.4/mi**	**119.4**	**254.2**	**40,827**	**58,072**	**17,245**	**0/ 0**	**0**
MAXIMUM PNV WITH 420 ASQ												
CHATHAM	NOT FEASIBLE		264.2									
KETCHIKAN	NOT FEASIBLE		611.5									
STIKINE	NOT FEASIBLE		384.3									
TONGASS TOTAL			**1,260.0**									
MAXIMUM PNV NO BELOW COST NDY ON NET REV												
CHATHAM	17.7	4.7	246.2	101.3 41%	6.1 2.9/mi	122.0	19.6	2,001	2,776	775	775/ 775	0
KETCHIKAN	80.5	10.9	611.5	462.2 70%	32.7 2.5/mi	117.5	148.9	10,194	18,888	8,694	8,694/ 8,694	0
STIKINE	50.5	13.4	384.3	256.6 67%	20.0 2.5/mi	116.9	78.1	6,270	9,358	3,088	3,088/ 3,088	0
TONGASS TOTAL	**148.7**	**29.0**	**1,260.0**	**784.1 62%**	**58.8 2.5/mi**	**117.9**	**246.6**	**18,465**	**31,022**	**12.557**	**12,557/ 12,557**	**0**

Table B-16
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 2)
Alternative A

FORPLAN RUN	NUMBER OF YEARS ABOVE COST DECADE 1 (YEARS)	NUMBER OF YEARS BELOW COST DECADE 1 (YEARS)	PERCENT OF ACRES HARVESTED BY TIMBER STRATA IN DECADE 1 A	B	C	D	PERCENT OF ACRES HARVESTED BY OPERABILITY CLASS DECADE 1 NORM.	DIFF.	ISOL.	PERCENT OF VOLUME HARVESTED BY HARVEST METHOD DECADE 1 EVEN-AGED	UNEVEN-AGED	ROAD CONST. COSTS (M$/YR)	ANNUAL SUPPLEMENTAL FUNDING REQUIRED ($/YEAR) YR 1	YR 2	YR 3	YR 4	YRs 5-10	10 YEAR AVERAGE
MAXIMUM TIMBER																		
CHATHAM	4	6	0%	70%	2%	1%	95%	5%	0%	100%	0%	8,060	5,748	4,408	3,523			1,368
KETCHIKAN	6	4	0%	66%	0%	34%	99%	1%	0%	100%	0%	14,637	2,831					283
STIKINE	6	4	0%	72%	17%	11%	98%	1%	1%	100%	0%	9,294	7,172	4,739	3,132			1,504
TONGASS TOTAL	**5**	**5**	**%**	**%**	**%**	**%**	**98%**	**2%**	**0%**	**100%**	**0%**	**31,991**	**15,751**	**9,147**	**6,655**			**3,155**
MAXIMUM PNV MIDDLE MARKET																		
CHATHAM	5	5	0%	48%	50%	2%	100%	0%	0%	100%	0%	2,402	2,404	1,783	1,372			556
KETCHIKAN	10	0	0%	62%	0%	38%	99%	1%	0%	100%	0%	8,217						
STIKINE	7	3	0%	61%	23%	16%	98%	2%	0%	100%	0%	5,006	4,228	2,474	1,314			802
TONGASS TOTAL	**8**	**2**	**0%**	**60%**	**14%**	**26%**	**99%**	**1%**	**0%**	**100%**	**0%**	**15,625**	**6,632**	**4,257**	**2,686**			**1,358**
MAXIMUM PNV HIGH MARKET																		
CHATHAM	10	0	0%	54%	44%	1%	81%	19%	0%	100%	0%	8,419						
KETCHIKAN	10	0	0%	66%	0%	34%	98%	2%	0%	100%	0%	14,997						
STIKINE	10	0	0%	72%	17%	11%	99%	1%	0%	100%	0%	9,474						
TONGASS TOTAL	**10**	**0**	**0%**	**66%**	**14%**	**20%**	**95%**	**5%**	**0%**	**100%**	**0%**	**32,889**						
MAXIMUM PNV LOW MARKET																		
CHATHAM	4	6	0%	0%	52%	48%	100%	0%	0%	100%	0%	0						
KETCHIKAN	4	6	0%	0%	0%	100%	100%	0%	0%	98%	2%	382						
STIKINE	4	6	0%	0%	0%	100%	100%	0%	0%	97%	3%	135						
TONGASS TOTAL	**4**	**6**	**0%**	**%**	**1%**	**99%**	**100%**	**0%**	**0%**	**98%**	**2%**	**516**						
MAXIMUM TIMBER NO BELOW COST																		
CHATHAM	4	6	0%	92%	8%	0%	100%	0%	0%	100%	0%	5,051	4,105	3,174	2,558			984
KETCHIKAN	6	4	0%	64%	0%	36%	98%	2%	0%	100%	0%	14,929	2,440					244
STIKINE	5	5	17%	50%	26%	7%	100%	0%	0%	100%	0%	9,676	7,963	5,674	4,162			1,780
TONGASS TOTAL	**5**	**5**	**6%**	**63%**	**10%**	**21%**	**99%**	**1%**	**0%**	**100%**	**0%**	**29,656**	**14,508**	**8,848**	**6,720**			**3,008**
MAXIMUM PNV WITH 420 ASQ																		
CHATHAM	NOT FEASIBLE																	
KETCHIKAN	NOT FEASIBLE																	
STIKINE	NOT FEASIBLE																	
TONGASS TOTAL																		
MAXIMUM PNV NO BELOW COST NDY ON NET REV																		
CHATHAM	7	3	0%	81%	17%	2%	100%	0%	0%	100%	0%	1,369	1,535	1,162	916			361
KETCHIKAN	10	0	13%	48%	6%	33%	100%	0%	0%	100%	0%	7,341						
STIKINE	9	1	0%	40%	49%	11%	100%	0%	0%	100%	0%	4,490	2,941	1,876	1,173			599
TONGASS TOTAL	**10**	**0**	**7**	**49**	**22**	**22**	**100**	**0**	**0**	**100**	**0**	**13,200**	**4,476**	**3,038**	**2,089**			**960**

Alternative B

Six different sensitivity tests were performed on Alternative B. The only constraint these sensitivity tests had in common was proportional timber harvest of volume class 6 and 7 combined on management areas within Allotments B, H, A-1, and Kuiu Island for APC until 2011 and Allotments E, F, and G for KPC until 2004. The following displays those items which were unique to each of the sensitivity tests. Results in Table B-17.

<u>B1</u> Maximum Timber objective function.

<u>B2</u> Maximum Present Net Value objective function assuming middle market timber values.

<u>B3</u> Maximum Present Net Value assuming high market timber values.

<u>B4</u> Maximum Present Net Value assuming low market timber values.

<u>B5</u> Maximum timber harvest with a decadal no below cost timber program.

<u>B6</u> Maximum Present Net Value with a mandatory 420 MMBF first decade allowable sale quantity.

Table B-17.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 1)
Alternative B

FORPLAN RUN	ASQ (MMBF)	UTILITY VOLUME (MMBF)	TENTATIVE SUITABLE ACRES AVAILABLE (MACRES)	TENTATIVE SUITABLE ACRES SCHEDULED (MACRES & %)	MILES OF ROAD CONSTRUCTION & MMBF/MILE 1ST DECADE (MILES/YEAR)	AVERAGE LOGGING COST DECADE 1 ($/MBF)	PNV AFTER 160 YEARS (MM$)	TIMBER PROGRAM COST DECADE 1 (M$/YEAR)	TIMBER PROGRAM REVENUE DECADE 1 (M$/YEAR)	NET TEMBER REVENUE DECADE 1 (M$/YEAR)	NET TIMBER REVENUE DECADE 5 / 10 (M$/YEAR)	CAPITAL INVESTMENT NEEDS DECADE 1 (M$/YEAR)
MAXIMUM TIMBER												
CHATHAM	82.5	21.9	342.2	333.0 97%	46.7 1.8/mi	125.4	-20.7	13,482	12,488	-994	426/ -2,855	0
KETCHIKAN	179.4	24.4	667.0	656.1 98%	73.0 2.5/mi	113.8	227.2	22,741	36,099	13,359	4,819/ -558	0
STIKINE	132.6	35.3	446.9	442.3 99%	53.7 2.5/mi	119.1	94.1	16,753	23,678	6,925	2,795/ -2,224	0
TONGASS TOTAL	394.5	81.6	1,456.1	1,431.4 98%	173.4 2.3/mi	118.0	300.6	52,976	72,265	19,289	8,040/ -5,637	0
MAXIMUM PNV MIDDLE MARKET												
CHATHAM	67.2	17.9	342.2	272.4 80%	34.5 1.9/mi	124.2	13.5	10,187	10,189	2	1,981/ -1,576	0
KETCHIKAN	177.8	24.2	667.0	650.0 97%	72.4 2.5/mi	113.5	231.0	22,529	36,219	13,690	5,111/ -523	0
STIKINE	89.0	23.7	446.9	287.3 64%	24.9 3.6/mi	118.4	142.9	8,703	16,894	8,191	5,018/ -784	0
TONGASS TOTAL	334.0	65.8	1,456.1	1,209.7 83%	131.8 2.5/mi	117.0	387.4	41,419	63,302	21,883	12,110/ -2,883	0
MAXIMUM PNV HIGH MARKET												
CHATHAM	82.2	21.9	342.2	332.2 97%	46.6 1.8/mi	125.7	424.3	13,434	30,513	17,079	16,828/ 14,815	0
KETCHIKAN	181.2	24.6	667.0	663.0 99%	74.5 2.4/mi	113.8	1,134.3	23,153	72,238	49,085	37,701/ 58,618	0
STIKINE	133.3	35.4	446.9	444.5 99%	54.2 2.5/mi	119.1	814.7	16,903	53,234	36,331	29,802/ 25,689	0
TONGASS TOTAL	396.7	81.9	1,456.1	1,439.7 99%	175.3 2.3/mi	118.1	2,373.3	53,490	155,985	102,495	84,331/ 99,122	0
MAXIMUM PNV LOW MARKET												
CHATHAM	66.3	17.6	342.2	266.7 78%	34.4 1.9/mi	124.2	-364.5	18,475	3,200	-15,275	-12,158/-16,649	8,351
KETCHIKAN	177.8	24.2	667.0	649.1 97%	74.0 2.4/mi	112.8	-661.2	30,070	7,704	-22,364	-27,561/-38,274	7,169
STIKINE	26.9	7.1	446.9	123.3 28%	5.1 5.2/mi	116.9	-77.1	3,804	1,297	-2,507	-3,294/ -5,307	1,740
TONGASS TOTAL	271.0	48.9	1,456.1	1,039.1 71%	113.5 2.4/mi	116.0	-1102.8	52,349	12,201	-40,146	-43,013/-60,230	17,260
MAXIMUM TIMBER NO BELOW COST												
Cht Infeasible	66.8	17.8	342.2	307.3 89%	44.6 1.5/mi	126.8	-31.9	12,494	9,994	-2,500	0/ 0	0
KETCHIKAN	178.9	24.3	667.0	656.7 98%	73.9 2.4/mi	114.4	201.2	22,924	36,297	13,373	0/ 465	0
STIKINE	124.2	33.0	446.9	441.9 99%	54.3 2.3/mi	124.4	29.8	16,590	20,213	3,623	0/ 0	0
TONGASS TOTAL	369.9	75.1	1.456.1	1,405.9 97%	172.8 2.1/mi	120.0	199.1	52,008	66,504	14,496	0/ 465	0
MAXIMUM PNV WITH 420 ASQ												
CHATHAM	NOT FEASIBLE											
KETCHIKAN	NOT FEASIBLE											
STIKINE	NOT FEASIBLE											
TONGASS TOTAL												

Table B-17.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 2)
Alternative B

FORPLAN RUN	NUMBER OF YEARS ABOVE COST DECADE 1 (YEARS)	NUMBER OF YEARS BELOW COST DECADE 1 (YEARS)	PERCENT OF ACRES HARVESTED BY TIMBER STRATA IN DECADE 1				PERCENT OF ACRES HARVESTED BY OPERABILITY CLASS DECADE 1			PERCENT OF VOLUME HARVESTED BY HARVEST METHOD DECADE 1		ROAD CONST. COSTS (M$/YR)	ANNUAL SUPPLEMENTAL FUNDING REQUIRED ($/YEAR)					
			A	B	C	D	NORM.	DIFF.	ISOL.	EVEN-AGED	UNEVEN-AGED		YR 1	YR 2	YR 3	YR 4	YRs 5-10	10 YEAR AVERAGE
MAXIMUM TIMBER																		
CHATHAM	4	6	1%	75%	23%	1%	93%	7%	0%	99%	1%	10,484	7,606	5,867	4,717			1,819
KETCHIKAN	6	4	1%	65%	0%	34%	99%	1%	0%	100%	0%	16,389	3,126					313
STIKINE	5	5	0%	71%	19%	10%	99%	1%	0%	100%	0%	12,056	8,638	5,841	3,992			1,847
TONGASS TOTAL	5	5	1%	69%	11%	19%	98%	2%	0%	100%	0%	38,928	19,370	11,708	8,709			3,979
MAXIMUM PNV MIDDLE MARKET																		
CHATHAM	4	6	0%	92%	7%	1%	100%	0%	0%	99%	1%	7,745	6,190	4,772	3,835			1,480
KETCHIKAN	6	4	0%	64%	0%	36%	97%	3%	0%	100%	0%	16,254	2,660					266
STIKINE	7	3	0%	63%	22%	15%	98%	2%	0%	100%	0%	5,590	4,797	2,920	1,679			940
TONGASS TOTAL	6	4	0%	69%	7%	23%	98%	2%	0%	100%	0%	29,589	13,648	7,692	5,514			2,685
MAXIMUM PNV HIGH MARKET																		
CHATHAM	10	0	0%	77%	22%	1%	93%	7%	0%	99%	1%	10,462						
KETCHIKAN	10	0	0%	66%	0%	34%	99%	1%	0%	100%	0%	16,725						
STIKINE	10	0	0%	71%	19%	10%	99%	1%	0%	100%	0%	12,168						
TONGASS TOTAL	10	0	0%	70%	11%	19%	98%	2%	0%	100%	0%	39,355						
MAXIMUM PNV LOW MARKET																		
CHATHAM	0	10	1%	92%	7%	0%	100%	0%	0%	100%	0%	7,723						
KETCHIKAN	0	10	0%	62%	0%	38%	97%	3%	0%	100%	0%	16,613						
STIKINE	2	8	0%	82%	0%	18%	100%	0%	0%	100%	0%	1,145						
TONGASS TOTAL	0	10	0%	71%	2%	27%	98%	2%	0%	100%	0%	25,481						
MAXIMUM TIMBER NO BELOW COST																		
CHATHAM	3	7	14%	80%	6%	0%	99%	1%	0%	99%	1%	10,013	6,289	4,880	3,948	16		1,513
KETCHIKAN	6	4	3%	62%	0%	35%	99%	1%	0%	100%	0%	16,591	2,813					281
STIKINE	5	5	9%	53%	34%	4%	100%	0%	0%	100%	0%	12,190	10,043	7,424	5,694			2,316
TONGASS TOTAL	5	5	7%	62%	12%	18%	99%	1%	0%	100%	0%	38,794	19,145	12,304	9,642	16		4,110
MAXIMUM PNV WITH 420 ASQ																		
CHATHAM	NOT FEASIBLE		%	%	%	%	%	%	%	%	%							
KETCHIKAN	NOT FEASIBLE		%	%	%	%	%	%	%	%	%							
STIKINE	NOT FEASIBLE		%	%	%	%	%	%	%	%	%							
TONGASS TOTAL			%	%	%	%	%	%	%	%	%							

Alternative C

Six different sensitivity tests were performed on Alternative C. The only constraint these sensitivity tests had in common was proportional timber harvest of volume class 6 and 7 combined on management areas within Allotment B, H, A-1, and Kuiu Island for APC until 2011 and Allotments E, F, and G on KPC until 2004. The following displays those items which were unique to each of the sensitivity tests. Results in Table B-18.

C1 Maximum Timber objective function.

C2 Maximum Present Net Value objective function assuming middle market timber values.

C3 Maximum Present Net Value objective function assuming high market timber values.

C4 Maximum Present Net Value objective function assuming low market timber values.

C5 Maximum timber harvest with a decadal no below cost timber program.

C6 Maximum Present Net Value with a mandatory 420 MMBF first decade allowable sale quantity.

Table B-18.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 1)
Alternative C

FORPLAN RUN	ASQ (MMBF)	UTILITY VOLUME (MMBF)	TENTATIVE SUITABLE ACRES AVAILABLE (MACRES)	TENTATIVE SUITABLE ACRES SCHEDULED (MACRES & %)		MILES OF ROAD CONSTRUCTION & MMBF/MILE 1ST DECADE (MILES/YEAR)		AVERAGE LOGGING COST DECADE 1 ($/MBF)	PNV AFTER 160 YEARS (MM$)	TIMBER PROGRAM COST DECADE 1 (M$/YEAR)	TIMBER PROGRAM REVENUE DECADE 1 (M$/YEAR)	NET TEMBER REVENUE DECADE 1 (M$/YEAR)	NET TIMBER REVENUE DECADE 5 / 10 (M$/YEAR)	CAPITAL INVESTMENT NEEDS DECADE 1 (M$/YEAR)
MAXIMUM TIMBER														
CHATHAM	126.2	33.6	509.6	495.5	97%	76.4	1.7/mi	122.1	-47.9	21,702	19,964	-1,738	225/ -5,607	0
KETCHIKAN	259.0	35.2	896.2	878.9	98%	116.3	2.2/mi	113.6	270.1	35,313	51,395	16,082	5,403/ -1,268	0
STIKINE	157.4	41.9	534.6	529.9	99%	67.4	2.3/mi	119.0	96.7	20,717	27,892	7,175	3,046/ -2,525	0
TONGASS TOTAL	**542.6**	**110.7**	**1,940.4**	**1,904.3**	**98%**	**260.1**	**2.1/mi**	**117.1**	**318.9**	**77,732**	**99,251**	**21,519**	**8,674/ -9,400**	**0**
MAXIMUM PNV MIDDLE MARKET														
CHATHAM	67.9	18.1	509.6	256.9	50%	28.9	2.3/mi	123.3	60.0	8,924	10,583	1,659	4,322/ -722	0
KETCHIKAN	177.8	24.2	896.2	637.6	71%	61.2	2.9/mi	112.5	340.1	19,997	36,560	16,563	9,564/ -173	0
STIKINE	102.4	27.2	534.6	331.7	62%	30.4	3.4/mi	118.6	159.2	10,410	19,276	8,866	5,995/ -895	0
TONGASS TOTAL	**348.1**	**69.5**	**1,940.4**	**1,226.2**	**63%**	**120.5**	**2.9/mi**	**116.4**	**559.3**	**39,331**	**66,419**	**27,088**	**19,881/ -1,790**	**0**
MAXIMUM PNV HIGH MARKET														
CHATHAM	124.8	33.2	509.6	488.4	96%	74.7	1.7/mi	121.8	652.2	21,265	47,351	26,086	17,254/ 14,544	0
KETCHIKAN	261.3	35.6	896.2	886.1	99%	118.6	2.2/mi	113.5	1,557.9	35,901	103,746	67,845	52,302/ 71,320	0
STIKINE	158.3	42.1	534.6	531.7	99%	67.9	2.3/mi	119.1	952.8	20,850	62,958	42,108	35,296/ 30,595	0
TONGASS TOTAL	**544.4**	**110.9**	**1,940.4**	**1,906.2**	**98%**	**261.2**	**2.1/mi**	**117.0**	**3,135.1**	**78,016**	**214,055**	**136,039**	**104,852/116,459**	**0**
MAXIMUM PNV LOW MARKET														
CHATHAM	66.3	17.6	509.6	255.0	50%	28.4	2.3/mi	123.7	-352.1	16,987	3,200	-13,787	-10,717/-15,349	8,240
KETCHIKAN	177.8	24.2	896.2	633.5	71%	67.2	2.6/mi	109.7	-526.6	25,970	7,704	-18,266	-24,548/-37,548	4,593
STIKINE	26.9	7.1	534.6	122.7	23%	5.1	5.3/mi	116.7	-75.6	3,777	1,297	-2,480	-3,281/ -5,366	1,691
TONGASS TOTAL	**271.0**	**48.9**	**1,940.4**	**1,011.2**	**52%**	**100.7**	**2.7/mi**	**113.8**	**-990.3**	**46,734**	**12,201**	**-34,533**	**-38,546/-58,263**	**14,524**
MAXIMUM TIMBER NO BELOW COST														
CHATHAM	80.6	21.4	509.6	328.2	64%	42.3	1.9/mi	122.1	26.9	12,421	12,421	0	0/ 0	0
KETCHIKAN	257.9	35.1	896.2	881.6	98%	117.8	2.2/mi	113.8	209.6	35,589	51,614	16,025	0/ 0	0
STIKINE	146.1	38.9	534.6	525.1	98%	67.7	2.2/mi	124.0	29.2	20,385	23,937	3,552	0/ 0	0
TONGASS TOTAL	**484.6**	**95.4**	**1,940.4**	**1,734.9**	**89%**	**227.8**	**2.1/mi**	**118.3**	**265.7**	**68,395**	**87,972**	**21,577**	**0/ 0**	**0**
MAXIMUM PNV WITH 420 ASQ														
CHATHAM	96.7	25.7	509.6	384.0	75%	54.7	1.8/mi	122.0	18.8	15,778	14,483	-1,295	3,448/ -3,206	0
KETCHIKAN	229.0	31.1	896.2	795.8	89%	97.7	2.3/mi	113.7	288.7	30,057	39,018	5,961	8,552/ -846	0
STIKINE	105.6	28.1	534.6	344.6	64%	33.9	3.1/mi	119.3	156.2	11,325	19,221	7,896	5,984/ -945	0
TONGASS TOTAL	**431.3**	**84.9**	**1,940.4**	**1,524.4**	**79%**	**186.3**	**2.3/mi**	**355.0**	**481.7**	**57,160**	**72,722**	**15,562**	**17,984/ -4,997**	**0**

Table B-18.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 2)
Alternative C

FORPLAN RUN	NUMBER OF YEARS ABOVE COST DECADE 1 (YEARS)	NUMBER OF YEARS BELOW COST DECADE 1 (YEARS)	PERCENT OF ACRES HARVESTED BY TIMBER STRATA IN DECADE 1 A / B / C / D	PERCENT OF ACRES HARVESTED BY OPERABILITY CLASS DECADE 1 NORM./DIFF./ISOL.	PERCENT OF VOLUME HARVESTED BY HARVEST METHOD DECADE 1 EVEN-AGED/UNEVEN-AGED	ROAD CONST. COSTS (M$/YR)	ANNUAL SUPPLEMENTAL FUNDING REQUIRED ($/YEAR) YR 1	YR 2	YR 3	YR 4	YRs 5-10	10 YEAR AVERAGE
MAXIMUM TIMBER												
CHATHAM	4	6	0% 56% 43% 1%	91% 9% 0%	100% 0%	17,152	10,793	8,130	6,371			2,529
KETCHIKAN	6	4	0% 68% 0% 32%	97% 3% 0%	100% 0%	26,109	5,230	328				556
STIKINE	5	5	0% 71% 20% 9%	99% 1% 0%	100% 0%	15,131	10,467	7,147	4,953			2,257
TONGASS TOTAL	**5**	**5**	**0% 66% 16% 18%**	**96% 4% 0%**	**100% 0%**	**58,392**	**26,490**	**15,606**	**11,324**			**5,342**
MAXIMUM PNV MIDDLE MARKET												
CHATHAM	4	6	0% 90% 8% 2%	100% 0% 0%	100% 0%	6,488	5,969	4,537	3,590			1,410
KETCHIKAN	7	3	0% 64% 0% 36%	99% 1% 0%	100% 0%	13,739	2,319					232
STIKINE	7	3	0% 65% 21% 14%	98% 2% 0%	100% 0%	6,825	5,668	3,509	2,082			1,126
TONGASS TOTAL	**6**	**4**	**0% 69% 8% 23%**	**99% 1% 0%**	**100% 0%**	**27,052**	**13,956**	**8,046**	**5,672**			**2,767**
MAXIMUM PNV HIGH MARKET												
CHATHAM	10	0	0% 57% 42% 1%	91% 9% 0%	100% 0%	16,770						
KETCHIKAN	10	0	0% 68% 0% 32%	96% 4% 0%	100% 0%	26,626						
STIKINE	10	0	0% 72% 19% 9%	99% 1% 0%	100% 0%	15,244						
TONGASS TOTAL	**10**	**0**	**0% 69% 8% 23%**	**99% 1% 0%**	**100% 0%**	**58,639**						
MAXIMUM PNV LOW MARKET												
CHATHAM	0	10	0% 94% 5% 1%	100% 0% 0%	100% 0%	6,376						
KETCHIKAN	1	9	0% 54% 0% 46%	100% 0% 0%	100% 0%	15,086						
STIKINE	2	8	0% 74% 0% 26%	100% 0% 0%	100% 0%	1,145						
TONGASS TOTAL	**0**	**10**	**0% 66% 1% 33%**	**100% 0% 0%**	**100% 0%**	**22,607**						
MAXIMUM TIMBER NO BELOW COST												
CHATHAM	4	6	0% 83% 16% 0%	100% 0% 0%	100% 0%	9,496	7,211	5,512	4,389			1,711
KETCHIKAN	6	4	2% 65% 0% 33%	97% 3% 0%	100% 0%	26,446	4,780					478
STIKINE	4	6	9% 53% 34% 4%	99% 1% 0%	100% 0%	15,199	11,670	8,588	6,551			2,681
TONGASS TOTAL	**5**	**5**	**4% 64% 13% 19%**	**98% 2% 0%**	**100% 0%**	**51,141**	**23,661**	**14,100**	**10,940**			**4,870**
MAXIMUM PNV WITH 420 ASQ												
CHATHAM	7	3	2% 87% 11% 0%	92% 8% 0%	100% 0%	12,280	9,075	7,036	5,689			2,180
KETCHIKAN	9	1	0% 78% 5% 17%	99% 1% 0%	100% 0%	21,934	11,043	6,710	3,846			2,160
STIKINE	6	4	0% 66% 23% 11%	100% 0% 0%	100% 0%	7,611	6,512	4,285	2,813			1,361
TONGASS TOTAL	**9**	**1**	**0% 77% 11% 12%**	**98% 2% 0%**	**100% 0%**	**41,824**	**26,631**	**18,031**	**12,348**			**5,701**

Alternative D

Six different sensitivity tests were performed on Alternative D. The only constraint these sensitivity tests had in common was proportional timber harvest of volume classes 6 and 7 combined on management areas within Allotments B, H, A-1, and Kuiu Island for APC until 2011 and Allotments E, F, and G on KPC until 2004. The following displays those items which were unique to each of the sensitivity tests. Results in Table B-19.

<u>D1</u> Maximum Timber objective function.

<u>D2</u> Maximum Present Net Value objective function assuming middle market timber values.

<u>D3</u> Maximum Present Net Value objective function assuming high market timber values.

<u>D4</u> Maximum Present Net Value objective function assuming low market timber values.

<u>D5</u> Maximum timber harvest with a decadal no below cost timber program.

<u>D6</u> Maximum Present Net Value with a mandatory 420 MMBF first decade allowable sale quantity.

Table B-19.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 1)
Alternative D

FORPLAN RUN	ASQ (MMBF)	UTILITY VOLUME (MMBF)	TENTATIVE SUITABLE ACRES AVAILABLE (MACRES)	TENTATIVE SUITABLE ACRES SCHEDULED (MACRES & %)		MILES OF ROAD CONSTRUCTION & MMBF/MILE 1ST DECADE (MILES/YEAR)		AVERAGE LOGGING COST DECADE 1 ($/MBF)	PNV AFTER 160 YEARS (MM$)	TIMBER PROGRAM COST DECADE 1 (M$/YEAR)	TIMBER PROGRAM REVENUE DECADE 1 (M$/YEAR)	NET TEMBER REVENUE DECADE 1 (M$/YEAR)	NET TIMBER REVENUE DECADE 5 / 10 (M$/YEAR)	CAPITAL INVESTMENT NEEDS DECADE 1 (M$/YEAR)
MAXIMUM TIMBER														
CHATHAM	119.2	31.7	495.9	473.2	95%	72.7	1.6/mi	123.1	-51.0	20,647	18,672	-1,975	243/ -5,501	0
KETCHIKAN	261.7	35.6	902.9	883.7	98%	113.1	2.3/mi	112.3	300.7	34,669	53,999	19,330	5,942/ -1,168	0
STIKINE	173.8	46.2	590.2	583.6	99%	73.3	2.4/mi	119.3	107.8	22,605	30,260	7,655	3,581/ -2,798	0
TONGASS TOTAL	**554.7**	**113.5**	**1,989.0**	**1,940.5**	**98%**	**259.1**	**2.1/mi**	**116.8**	**357.5**	**77,921**	**102,931**	**25,010**	**9,766/ -9,467**	**0**
MAXIMUM PNV MIDDLE MARKET														
CHATHAM	67.2	17.9	495.2	256.2	52%	39.9	1.7/mi	123.2	57.9	8,696	10,443	1,747	3,830/ -815	0
KETCHIKAN	183.0	24.9	902.9	647.3	72%	61.9	3.0/mi	110.0	363.7	20,364	40,307	19,943	10,367/ -128	0
STIKINE	89.0	23.6	590.2	287.3	49%	27.9	3.1/mi	118.8	142.9	8,703	16,894	8,191	5,018/ -784	0
TONGASS TOTAL	**339.2**	**66.4**	**1,989.0**	**1,190.8**	**60%**	**129.7**	**2.6/mi**	**114.9**	**564.5**	**37,763**	**67,634**	**29,881**	**19,215/ -1,727**	**0**
MAXIMUM PNV HIGH MARKET														
CHATHAM	116.8	31.1	495.2	460.2	93%	69.0	1.7/mi	122.8	586.1	19,755	44,095	24,340	23,971/ 19,063	0
KETCHIKAN	263.5	35.8	902.9	895.1	99%	115.1	2.3/mi	112.1	1,595.2	35,191	106,462	71,271	53,307/ 72,672	0
STIKINE	175.0	46.6	590.2	586.8	99%	74.1	2.4/mi	119.3	1,054.2	22,823	69,064	46,241	39,504/ 33,979	0
TONGASS TOTAL	**555.3**	**113.5**	**1,989.0**	**1,942.1**	**98%**	**258.2**	**2.2/mi**	**116.6**	**3,235.5**	**77,769**	**219,621**	**141,852**	**116,782/125,714**	**0**
MAXIMUM PNV LOW MARKET														
CHATHAM	66.3	17.6	495.2	257.4	52%	28.1	2.4/mi	123.2	-324.6	16,859	3,200	-13,659	-11,041/-15,440	8,150
KETCHIKAN	177.8	24.2	902.9	615.5	68%	72.9	2.4/mi	103.0	-526.2	22,676	9,404	-13,274	-23,199/-36,399	0
STIKINE	26.9	7.1	590.2	126.9	22%	6.3	4.3/mi	112.3	-74.6	2,835	1,297	-1,538	-3,282/ -5,257	498
TONGASS TOTAL	**271.0**	**48.9**	**1,989.0**	**999.8**	**50%**	**107.3**	**2.5/mi**	**108.9**	**-925.4**	**42,370**	**13,901**	**-28,471**	**-37,522/-57,096**	**8,648**
MAXIMUM TIMBER NO BELOW COST														
CHATHAM	66.9	17.8	495.2	270.3	55%	31.0	2.2/mi	123.3	48.2	9,372	10,253	881	2,615/ 0	0
KETCHIKAN	259.3	35.3	902.9	885.2	98%	112.1	2.3/mi	114.0	251.6	34,363	52,464	18,101	0/ 0	0
STIKINE	162.3	43.2	590.2	582.3	99%	74.7	2.2/mi	125.9	32.5	22,518	26,207	3,629	0/ 0	0
TONGASS TOTAL	**488.5**	**96.3**	**1,989.0**	**1,737.8**	**87%**	**217.8**	**2.2/mi**	**119.2**	**332.3**	**66,253**	**88,924**	**22,611**	**2,615/ 0**	**0**
MAXIMUM PNV WITH 420 ASQ														
CHATHAM	96.7	25.7	495.2	369.8	75%	47.0	2.1/mi	122.4	26.2	14,058	15,192	1,134	2,117/ -3,656	0
KETCHIKAN	229.0	31.1	902.9	775.5	86%	89.1	2.6/mi	111.7	348.7	28,100	48,666	20,566	9,642/ -644	0
STIKINE	114.6	30.5	590.2	373.9	63%	34.2	3.4/mi	118.8	172.0	11,697	20,955	9,258	6,664/ -1,003	0
TONGASS TOTAL	**440.3**	**87.3**	**1,989.0**	**1,519.2**	**76%**	**170.3**	**2.6/mi**	**115.9**	**546.9**	**53,855**	**84,813**	**30,958**	**18,423/ -5,303**	**0**

Table B-19.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 2)
Alternative D

FORPLAN RUN	NUMBER OF YEARS ABOVE COST DECADE 1 (YEARS)	NUMBER OF YEARS BELOW COST DECADE 1 (YEARS)	PERCENT OF ACRES HARVESTED BY TIMBER STRATA IN DECADE 1 A	B	C	D	PERCENT OF ACRES HARVESTED BY OPERABILITY CLASS DECADE 1 NORM.	DIFF.	ISOL.	PERCENT OF VOLUME HARVESTED BY HARVEST METHOD DECADE 1 EVEN-AGED	UNEVEN-AGED	ROAD CONST. COSTS (M$/YR)	ANNUAL SUPPLEMENTAL FUNDING REQUIRED ($/YEAR) YR 1	YR 2	YR 3	YR 4	YRs 5-10	10 YEAR AVERAGE
MAXIMUM TIMBER																		
CHATHAM	4	6	0%	59%	40%	1%	89%	11%	0%	100%	0%	16,321	10,372	7,858	6,196			2,443
KETCHIKAN	6	4	0%	64%	0%	36%	97%	3%	0%	100%	0%	25,391	3,222					322
STIKINE	5	5	0%	73%	20%	7%	99%	1%	0%	100%	0%	16,456	12,083	8,418	5,996			2,650
TONGASS TOTAL	**5**	**5**	**0%**	**66%**	**15%**	**19%**	**96%**	**4%**	**0%**	**100%**	**0%**	**58,168**	**25,677**	**16,276**	**12,192**			**5,415**
MAXIMUM PNV MIDDLE MARKET																		
CHATHAM	4	6	0%	91%	7%	2%	100%	0%	0%	100%	0%	8,958	5,936	4,518	3,581			1,404
KETCHIKAN	7	3	0%	56%	0%	44%	96%	4%	0%	100%	0%	13,897						
STIKINE	7	3	0%	72%	18%	10%	98%	2%	0%	100%	0%	6,264	4,778	2,902	1,662			934
TONGASS TOTAL	**7**	**3**	**0%**	**67%**	**6%**	**27%**	**97%**	**3%**	**0%**	**100%**	**0%**	**29,118**	**10,432**	**7,420**	**5,243**			**2,308**
MAXIMUM PNV HIGH MARKET																		
CHATHAM	10	0	0%	59%	40%	1%	90%	10%	0%	100%	0%	15,491						
KETCHIKAN	10	0	0%	63%	1%	36%	97%	3%	0%	100%	0%	25,840						
STIKINE	10	0	0%	71%	21%	8%	99%	1%	0%	100%	0%	16,635						
TONGASS TOTAL	**10**	**0**	**0%**	**65%**	**16%**	**20%**	**96%**	**4%**	**0%**	**100%**	**0%**	**57,966**						
MAXIMUM PNV LOW MARKET																		
CHATHAM	0	10	0%	93%	6%	1%	99%	1%	0%	100%	0%	6,308						
KETCHIKAN	2	8	0%	29%	3%	68%	91%	9%	0%	99%	1%	16,366						
STIKINE	3	7	0%	49%	0%	51%	96%	4%	0%	99%	1%	1,414						
TONGASS TOTAL	**1**	**9**	**0%**	**47%**	**3%**	**50%**	**93%**	**7%**	**0%**	**99%**	**1%**	**24,089**						
MAXIMUM TIMBER NO BELOW COST																		
CHATHAM	4	6	0%	89%	10%	1%	99%	1%	0%	100%	0%	6,960	6,049	4,638	3,706			1,439
KETCHIKAN	6	4	3%	63%	0%	34%	98%	2%	0%	100%	0%	25,166	4,238					424
STIKINE	4	6	11%	52%	33%	4%	98%	2%	0%	100%	0%	16,770	13,346	9,922	7,659			3,093
TONGASS TOTAL	**5**	**5**	**5%**	**63%**	**12%**	**20%**	**98%**	**2%**	**0%**	**100%**	**0%**	**48,896**	**23,632**	**14,560**	**11,365**			**4,956**
MAXIMUM PNV WITH 420 ASQ																		
CHATHAM	4	6	0%	67%	32%	1%	99%	1%	0%	100%	0%	10,552	8,366	6,327	4,980			1,967
KETCHIKAN	7	3	0%	60%	0%	40%	96%	4%	0%	100%	0%	20,003	1,395					140
STIKINE	7	3	0%	69%	20%	11%	98%	2%	0%	100%	0%	7,678	6,972	4,555	2,957			1,448
TONGASS TOTAL	**6**	**4**	**0%**	**64%**	**12%**	**24%**	**97%**	**3%**	**0%**	**100%**	**0%**	**38,232**	**16,734**	**10,882**	**5,937**			**3,355**

Alternative P

Ten different sensitivity tests were performed on Alternative P. The only constraint these sensitivity tests had in common was proportional timber harvest on volume classes 6 and 7 combined on management areas within Allotments B, H, A-1, and Kuiu Island for APC until 2011 and Allotments E, F, and G for KPC until 2004. The following displays those items which were unique tyo each of the sensitivity tests. Results in Table B-20.

P1 Maximum Timber objective function.

P2 Maximum Present Net Value objective function assuming middle market timber values.

P3 Maximum Present Net Value objective function assuming high market timber values.

P4 Maximum Present Net Value objective function assuming low market timber values.

P5 Maximum Timber harvest with a decadal no below cost timber program.

P6 Maximum Present Net Value with a mandatory 420 MMBF first decade allowable sale quantity.

P7 Maximum Timber with a decadal no below cost timber program and non-declining net timber revenue for 16 decades.

P8 Maximum Present Net Value with a decadal no below cost timber program.

P9 Maximum Present Net Value with a decadal no below cost timber program and non-declining net timber revenue for 16 decades.

P10 Maximum timber harvest with a decadal no below cost timber program and incorporation of the ten year timber schedule.

Table B-20.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 1)
Alternative P

FORPLAN RUN	ASQ (MMBF)	UTILITY VOLUME (MMBF)	TENTATIVE SUITABLE ACRES AVAILABLE (MACRES)	TENTATIVE SUITABLE ACRES SCHEDULED (MACRES & %)	MILES OF ROAD CONSTRUCTION & MMBF/MILE 1ST DECADE (MILES/YEAR)	AVERAGE LOGGING COST DECADE 1 ($/MBF)	PNV AFTER 160 YEARS (MM$)	TIMBER PROGRAM COST DECADE 1 (M$/YEAR)	TIMBER PROGRAM REVENUE DECADE 1 (M$/YEAR)	NET TEMBER REVENUE DECADE 1 (M$/YEAR)	NET TIMBER REVENUE DECADE 5 / 10 (M$/YEAR)	CAPITAL INVESTMENT NEEDS DECADE 1 (M$/YEAR)
MAXIMUM TIMBER												
CHATHAM	118.1	31.4	505.6	482.3 95%	75.5 1.6/mi	124.8	-43.2	21,251	18,168	-3,083	205/ -4,117	0
KETCHIKAN	235.0	32.0	836.8	819.2 98%	106.5 2.2/mi	117.7	227.7	32,239	39,921	7,682	1,247/ -1,147	0
STIKINE	143.6	38.2	516.1	508.8 99%	64.3 2.2/mi	123.2	85.6	19,529	25,154	5,625	4,118/ -2,863	0
TONGASS TOTAL	496.7	101.6	1,858.5	1,810.3 97%	246.3 2.0/mi	121.0	270.1	73,019	83,243	10,224	5,570/ -8,127	0
MAXIMUM PNV MIDDLE MARKET												
CHATHAM	68.2	18.1	505.6	257.5 51%	29.1 2.3/mi	123.3	55.7	8,977	10,631	1,654	3,761/ -892	0
KETCHIKAN	178.2	24.2	836.8	631.3 75%	63.8 2.8/mi	112.4	312.4	20,615	36,704	16,089	8,316/ -282	0
STIKINE	107.8	28.7	516.1	333.9 65%	32.7 3.3/mi	118.7	140.9	11,116	19,969	8,853	4,965/ -2,688	0
TONGASS TOTAL	354.2	71.0	1,858.5	1,222.5 66%	125.6 2.8/mi	116.4	509.0	40,708	67,304	26,596	17,042/ -3,862	0
MAXIMUM PNV HIGH MARKET												
CHATHAM	118.8	31.6	505.6	489.9 97%	76.8 1.5/mi	125.3	597.1	21,555	44,389	22,834	23,014/ 21,298	0
KETCHIKAN	237.1	32.3	836.8	828.6 99%	108.4 2.2/mi	117.6	1,418.1	32,756	87,382	54,626	41,119/ 68,052	0
STIKINE	145.0	38.6	516.1	512.5 99%	66.5 2.2/mi	122.8	864.0	20,068	57,544	37,476	34,361/ 26,908	0
TONGASS TOTAL	500.9	102.5	1,858.5	1,831.0 99%	251.7 2.0/mi	120.9	2,879.2	74,379	189,315	114,936	98,494/116,258	0
MAXIMUM PNV LOW MARKET												
CHATHAM	66.3	17.6	505.6	254.8 50%	28.4 2.3/mi	123.7	-328.7	16,995	3,200	-13,795	-10,826/-15,893	8,221
KETCHIKAN	177.8	24.2	836.8	625.9 75%	63.8 2.8/mi	112.5	-591.8	27,695	7,704	-19,991	-26,121/-38,009	7,091
STIKINE	71.7	19.1	516.1	263.0 51%	25.1 2.9/mi	118.2	-32.0	15,239	3,463	-11,776	-11,708/-26,046	8,409
TONGASS TOTAL	315.8	60.9	1,858.5	1,143.7 62%	117.3 2.7/mi	116.2	-925.5	59,929	14,367	-45,562	-48,655/-79,948	23,721
MAXIMUM TIMBER NO BELOW COST												
CHATHAM	78.6	20.9	505.6	320.7 63%	41.2 1.9/mi	121.8	25.6	12,118	12,118	0	0/ 0	0
KETCHIKAN	238.7	32.5	836.8	820.3 98%	106.2 2.2/mi	114.4	216.7	32,305	47,857	15,552	0/ 0	0
STIKINE	140.1	37.3	516.1	505.2 98%	64.7 2.2/mi	124.8	27.7	19,501	22,867	3,366	0/ 0	0
TONGASS TOTAL	457.4	90.7	1,858.5	1,646.2 89%	212.1 2.2/mi	118.9	270.0	63,924	82,842	18,918	0/ 0	0
MAXIMUM PNV WITH 420 ASQ												
CHATHAM	96.8	25.8	505.6	389.1 77%	55.3 1.8/mi	124.9	14.1	15,911	14,590	-1,321	1,648/ -3,198	0
KETCHIKAN	229.0	31.1	836.8	800.0 96%	101.6 2.3/mi	117.9	238.9	30,929	38,466	7,537	2,538/ -1,040	0
STIKINE	110.2	29.3	516.1	342.3 66%	35.9 3.1/mi	123.4	136.9	11,934	20,150	8,216	4,846/ -2,908	0
TONGASS TOTAL	436.0	86.2	1,858.5	1,531.4 82%	192.8 2.3/mi	120.8	389.9	58,774	73,206	14,432	9,032/ -7,146	0

Table B-20.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 1, Cont.)
Alternative P

FORPLAN RUN	ASQ (MMBF)	UTILITY VOLUME (MMBF)	TENTATIVE SUITABLE ACRES AVAILABLE (MACRES)	TENTATIVE SUITABLE ACRES SCHEDULED (MACRES & %)	MILES OF ROAD CONSTRUCTION & MMBF/MILE 1ST DECADE (MILES/YEAR)	AVERAGE LOGGING COST DECADE 1 ($/MBF)	PNV AFTER 160 YEARS (MM$)	TIMBER PROGRAM COST DECADE 1 (M$/YEAR)	TIMBER PROGRAM REVENUE DECADE 1 (M$/YEAR)	NET TEMBER REVENUE DECADE 1 (M$/YEAR)	NET TIMBER REVENUE DECADE 5 / 10 (M$/YEAR)	CAPITAL INVESTMENT NEEDS DECADE 1 (M$/YEAR)
MAXIMUM TIMBER NO BELOW COST NDY ON NET REV												
CHATHAM	78.5	21.0	505.6	320.6 63%	41.2 1.9/mi	132.5	2.5	12,117	12,117	0	0/ 0	0
KETCHIKAN	226.3	30.8	836.8	829.6 99%	114.0 2.0/mi	118.3	77.2	33,691	36,742	3,051	3,051/ 3,051	0
STIKINE	137.9	36.7	516.1	505.0 98%	68.7 2.0/mi	132.4	5.0	20,330	20,526	196	196/ 196	0
TONGASS TOTAL	442.7	88.5	1,858.5	1,655.2 89%	223.9 2.0/mi	120.5	84.7	66,138	69,385	3,247	3,247/ 3,247	0
MAXIMUM PNV MIDDLE MARKET NO BELOW COST												
CHATHAM	67.1	17.8	505.6	269.1 53%	32.9 2.0/mi	123.8	47.2	9,812	10,196	384	2,925/ 0	0
KETCHIKAN	178.2	24.2	836.8	632.5 76%	64.2 2.8/mi	112.4	319.4	20,707	36,751	16,034	9,080/ 93	0
STIKINE	94.1	25.0	516.1	315.1 61%	29.4 3.2/mi	117.8	174.4	9,918	18,014	8,096	3,559/ 0	0
TONGASS TOTAL	339.4	67.0	1,858.5	1,216.7 65%	126.5 2.7/mi	120.6	514.0	40,437	64,961	24,514	15,564/ 93	0
MAXIMUM PNV MIDDLE MARKET NO BELOW COST NDY ON NET REV												
CHATHAM	66.9	17.8	505.6	280.9 56%	34.0 2.0/mi	124.7	4.6	10,091	10,124	33	363/ 363	0
KETCHIKAN	177.8	24.2	836.8	664.4 79%	80.1 2.2/mi	113.3	156.4	24,307	30,491	6,184	6,184/ 6,184	0
STIKINE	77.2	20.5	516.1	356.2 69%	35.1 2.2/mi	124.7	46.2	10,622	12,447	1,825	1,825/ 1,825	0
TONGASS TOTAL	321.9	62.5	1,858.5	1,301.5 70%	149.2 2.2/mi	116.7	207.2	45,020	53,062	8,042	8,372/ 8,372	0
MAXIMUM TIMBER NO BELOW COST 10 YEAR TIMBER SCHEDULE												
CHATHAM	NOT FEASIBLE		505.6									
KETCHIKAN	234.1	31.8	836.8	820.5 98%	107.3 2.2/mi	117.7	193.2	32,394	39,686	7,292	0/ 0	0
STIKINE	140.1	37.3	516.1	505.5 98%	64.7 2.2/mi	123.7	27.6	19,492	22,847	3,355	0/ 0	0
TONGASS TOTAL			1,858.5									

Table B-20.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 2)
Alternative P

FORPLAN RUN	NUMBER OF YEARS ABOVE COST DECADE 1 (YEARS)	NUMBER OF YEARS BELOW COST DECADE 1 (YEARS)	PERCENT OF ACRES HARVESTED BY TIMBER STRATA IN DECADE 1 A / B / C / D	PERCENT OF ACRES HARVESTED BY OPERABILITY CLASS DECADE 1 NORM./DIFF./ISOL.	PERCENT OF VOLUME HARVESTED BY HARVEST METHOD DECADE 1 EVEN-AGED/UNEVEN-AGED	ROAD CONST. COSTS (M$/YR)	ANNUAL SUPPLEMENTAL FUNDING REQUIRED ($/YEAR) YR 1	YR 2	YR 3	YR 4	YRs 5-10	10 YEAR AVERAGE
MAXIMUM TIMBER												
CHATHAM	4	6	2% 74% 23% 1%	95% 5% 0%	100% 0%	16,950	10,606	8,116	6,470			2,519
KETCHIKAN	5	5	0% 78% 6% 16%	98% 2% 0%	100% 0%	23,909	11,468	7,020	4,081			2,257
STIKINE	5	5	8% 61% 22% 9%	99% 1% 0%	100% 0%	14,435	9,837	6,808	4,807			2,145
TONGASS TOTAL	**4**	**6**	**3% 69% 17% 11%**	**97% 3% 0%**	**100% 0%**	**55,294**	**31,912**	**21,944**	**15,357**			**6,921**
MAXIMUM PNV MIDDLE MARKET												
CHATHAM	4	6	0% 90% 8% 2%	100% 0% 0%	100% 0%	6,533	5,979	4,541	3,591			1,411
KETCHIKAN	7	3	0% 64% 0% 36%	99% 1% 0%	100% 0%	14,323	2,252					225
STIKINE	7	3	0% 68% 19% 13%	98% 2% 0%	100% 0%	7,341	6,303	4,029	2,526			1,286
TONGASS TOTAL	**6**	**4**	**0% 70% 7% 22%**	**99% 1% 0%**	**100% 0%**	**28,197**	**14,534**	**8,570**	**6,117**			**2,922**
MAXIMUM PNV HIGH MARKET												
CHATHAM	10	0	2% 74% 23% 1%	95% 5% 0%	100% 0%	17,242						
KETCHIKAN	10	0	0% 77% 6% 17%	98% 2% 0%	100% 0%	24,336						
STIKINE	10	0	8% 53% 30% 9%	98% 2% 0%	100% 0%	14,929						
TONGASS TOTAL	**10**	**0**	**3% 69% 17% 11%**	**97% 3% 0%**	**100% 0%**	**56,507**						
MAXIMUM PNV LOW MARKET												
CHATHAM	0	10	0% 94% 5% 1%	100% 0% 0%	100% 0%	6,376						
KETCHIKAN	1	9	0% 75% 0% 25%	100% 0% 0%	100% 0%	14,323						
STIKINE	0	10	0% 91% 0% 9%	100% 0% 0%	100% 0%	5,635						
TONGASS TOTAL	**0**	**10**	**0% 83% 1% 16%**	**100% 0% 0%**	**100% 0%**	**26,334**						
MAXIMUM TIMBER NO BELOW COST												
CHATHAM	4	6	0% 84% 15% 1%	100% 0% 0%	100% 0%	9,249	7,033	5,375	4,280			1,669
KETCHIKAN	6	4	2% 63% 0% 35%	97% 3% 0%	100% 0%	23,842	4,341					434
STIKINE	4	6	10% 53% 33% 4%	99% 1% 0%	100% 0%	14,525	11,277	8,322	6,369			2,597
TONGASS TOTAL	**5**	**5**	**4% 64% 13% 20%**	**98% 2% 0%**	**100% 0%**	**47,616**	**22,651**	**13,697**	**10,649**			**4,700**
MAXIMUM PNV WITH 420 ASQ												
CHATHAM	4	6	1% 87% 11% 1%	94% 6% 0%	100% 0%	12,415	9,007	6,964	5,614			2,159
KETCHIKAN	5	5	0% 78% 6% 16%	98% 2% 0%	100% 0%	22,809	11,595	7,262	4,398			2,326
STIKINE	6	4	0% 67% 21% 12%	99% 1% 0%	100% 0%	8,060	6,700	4,376	2,840			1,391
TONGASS TOTAL	**5**	**5**	**0% 77% 11% 12%**	**97% 3% 0%**	**100% 0%**	**43,284**	**27,302**	**18,602**	**12,853**			**5,876**

Table B-20.
Summary Of Sensitivity Test Outputs For TLMP Supplement (Part 2, Cont.)
Alternative P

FORPLAN RUN	NUMBER OF YEARS ABOVE COST DECADE 1 (YEARS)	NUMBER OF YEARS BELOW COST DECADE 1 (YEARS)	PERCENT OF ACRES HARVESTED BY TIMBER STRATA IN DECADE 1 A	B	C	D	PERCENT OF ACRES HARVESTED BY OPERABILITY CLASS DECADE 1 NORM.	DIFF.	ISOL.	PERCENT OF VOLUME HARVESTED BY HARVEST METHOD DECADE 1 EVEN-AGED	UNEVEN-AGED	ROAD CONST. COSTS (M$/YR)	ANNUAL SUPPLEMENTAL FUNDING REQUIRED ($/YEAR) YR 1	YR 2	YR 3	YR 4	YRs 5-10	10 YEAR AVERAGE
MAXIMUM TIMBER NO BELOW COST NDY ON NET REV																		
CHATHAM	4	6	0%	84%	15%	1%	99%	1%	0%	100%	0%	9,249	7,034	5,376	4,281			
KETCHIKAN	4	6	16%	59%	16%	9%	98%	2%	0%	100%	0%	25,593	12,742	8,459	5,628			2,683
STIKINE	4	6	25%	44%	31%	0%	100%	0%	0%	100%	0%	15,423	13,079	10,170	8,248	133		3,163
TONGASS TOTAL	**4**	**6**	**16%**	**59%**	**20%**	**5%**	**99%**	**1%**	**0%**	**100%**	**0%**	**49,264**	**32,855**	**24,005**	**18,157**	**133**		**7,515**
MAXIMUM PNV MIDDLE MARKET NO BELOW COST																		
CHATHAM	7	3	1%	90%	8%	1%	100%	0%	0%	100%	0%	7,386	6,145	4,730	3,796			1,467
KETCHIKAN	10	0	0%	64%	0%	36%	99%	1%	0%	100%	0%	14,413	2,205					220
STIKINE	9	1	0%	52%	33%	15%	98%	2%	0%	100%	0%	6,600	4,909	2,925	1,614			945
TONGASS TOTAL	**10**	**0**	**0%**	**66%**	**11%**	**23%**	**99%**	**1%**	**0%**	**100%**	**0%**	**28,399**	**13,259**	**7,655**	**5,410**			**2,632**
MAXIMUM PNV MIDDLE MARKET NO BELOW COST NDY ON NET REV																		
CHATHAM	7	3	7%	89%	4%	0%	100%	0%	0%	100%	0%	7,633	6,178	4,767	3,835			1,478
KETCHIKAN	9	1	0%	62%	24%	14%	98%	2%	0%	100%	0%	17,982	8,388	5,023	2,799			1,621
STIKINE	8	2	11%	81%	4%	4%	100%	0%	0%	100%	0%	7,880	6,357	4,730	3,654			1,474
TONGASS TOTAL	**8**	**2**	**4%**	**72%**	**15%**	**9%**	**99%**	**1%**	**0%**	**100%**	**0%**	**33,495**	**20,923**	**14,519**	**10,287**			**4,573**
MAXIMUM TIMBER NO BELOW COST 10 YEAR TIMBER SCHEDULE																		
CHATHAM	NOT FEASIBLE		%	%	%	%	%	%	%	%	%							
KETCHIKAN	9	1	0%	77%	6%	17%	97%	3%	0%	100%	0%	24,089	11,492	7,062	4,134			2,269
STIKINE	8	2	7%	57%	32%	4%	100%	0%	0%	100%	0%	14,525	11,297	8,342	6,389			2,603
TONGASS TOTAL																		

Adjustments to 10-year Sale Schedule. In order to meet the 10-year timber sale plan in Alternative P, the Chatham area's sale schedule was slightly modified in order to achieve a feasible solution. The final results of the alternatives appear later in this appendix.

Analysis of Constraints within Alternatives

Following the analysis of various objective functions, ASQ constraints, and market assumptions for each alternative, an in-depth analysis was conducted on a selected group of discretionary constraints. Conducted as an "analysis by subtraction" test, this process was designed to show the impact of each constraint to the solution of the alternative. Changes in Present Net Value (PNV) and Allowable Sale Quantity (ASQ) were use to measure the effects of each constraint. This process also provided insight into those constraints that may be redundant (i.e., no effect on objective function).

Constraint Analysis by Subtraction. Six constraints were being considered for possible inclusion into the final formulation of all alternatives. These discretionary constraints are:

1) No Below Cost - This constraint forces all decades over the planning horizon to have a positive net revenue.

2) Non-declining Revenue - Every decade must have at least the same amount of revenue as the previous decade; revenue can go up but it cannot go down. This constraint serves as a proxy to ensure a reasonable amount of each volume class is scheduled for harvest each decade.

3) Volume Class 4, difficult operability - No harvest volume can be obtained from volume class 4 on areas of difficult operability.

4) Isolated Stands - No timber harvest from any timber stand classified as having isolated operability.

5) 7% of ASQ from Difficult - In any period, no more than 7% of the ASQ can come from stands of difficult operability.

6) 30% of Volume Class 4 acres harvested - For the first two decades, of the total acres harvested, at least 30% must be volume class 4 acres.

The first step of this analysis was to make a run with all six constraints incorporated in the model. This result was used to determine the effect of constraint removal. One at a time, each constraint was removed and the model re-run.

The constraint was then put back in and the next one removed. The change from the base number was used as the impact value of the absent constraint; the constraint being tested was the one currently deleted from the model. The results of these tests are found in Table B-21. Additional sensitivity tests were also run. Alternative A was run under a maximization of timber volume objective function instead of maximization of PNV. The results of this test are found in Table B-22. Additional tests on Alternative P measured the impacts of tighter dispersion constraints and the effect of bid versus mid-market values. Results of these tests are found in Table B-23.

Table B-21
Sensitivity Analysis Of Additional Constraints Considered For Alternatives

	PRESENT NET VALUE (MM$)	TOTAL ASQ (MMBF)	CHATHAM ASQ (MMBF)	KETCHIKAN ASQ (MMBF)	STIKINE ASQ (MMBF)	NET TIMBER REVENUE (M$/YR)	AVERAGE SUPPLEMENTAL FUNDING (M$/YR)	DISTRIBUTION OF ACRES CLEARCUT VC4 VC5 VC6 VC7 (% OF TOTAL)	SUITABLE ACRES SCHEDULED (MACRES)	AVERAGE LOGGING COST ($/MBF)	RUNID
ORIGINAL RUN, **ALTERNATIVE A**	289.1	148.7	17.7	80.5	50.5	14,800	1,125	7% 49% 22% 22%	784 62%	138.2	
(Max PNV, No Below Cost, Nondeclining Revenue)											
EFFECT OF NO BELOW COST CONSTRAINT	-0.0	-0.0	-0.0	-0.0	-0.0						#ABS02
EFFECT OF NON-DECLINING REVENUE CONST.	-174.5	-77.8	-14.2	-36.1	-27.5						#ARV02
EFFECT OF VC 4 DIFFICULT CONSTRAINT	-.9	-3.1	-1.2	-0.0	-1.9						#AVD02
EFFECT OF ISOLATED OPERABILITY CONSTRAINT	-.5	-.4	-.4	-0.0	-0.0						#AIS02
EFFECT OF 7% OF ASQ FROM DIFF. OPERABILITY	-.9	+2.3	+.1	+2.0	+.2						#ADF02
EFFECT OF 30% OF ACRES HARVESTED FROM VC 4	-4.8	-5.1	-.6	-4.2	-.3						#A3002
ORIGINAL RUN WITH ALL ADDITIONAL CONSTRAINTS	281.4	140.4	15.8	75.8	48.8	11,000	1,091	19% 35% 18% 28%	758 60%	145.2	#AV401
ORIGINAL RUN, **ALTERNATIVE B**	288.0	363.1	60.0	178.9	124.2	19,900	4,695	5% 62% 14% 19%	1,356 93%	131.7	#BBC02
(Max Timber, No Below Cost)											
EFFECT OF NO BELOW COST CONSTRAINT	-0.0	-0.0	-0.0	-0.0	-0.0						#BBS02
EFFECT OF NON-DECLINING REVENUE CONST.	-193.9	-31.3	-9.2	-8.8	-13.3						#BRV02
EFFECT OF VC 4 DIFFICULT CONSTRAINT	+41.6	-26.0	-9.0	-9.6	-7.4						#BVD02
EFFECT OF ISOLATED OPERABILITY CONSTRAINT	+83.9	-20.2	-9.7	-3.6	-6.9						#BIS02
EFFECT OF 7% OF ASQ FROM DIFF. OPERABILITY	-3.5	-0.0	-0.0	-0.0	-0.0						#BDF02
EFFECT OF 30% OF ACRES HARVESTED FROM VC 4	-18.1	-9.2	-3.6	-3.5	-2.1						#B3002
ORIGINAL RUN WITH ALL ADDITIONAL CONSTRAINTS	187.2	287.6	43.9	148.3	95.4	6,400	5,733	29% 39% 23% 9%	1,197 82%	154.8	#BV401
ORIGINAL RUN, **ALTERNATIVE C**	311.5	484.6	80.6	257.9	146.1	18,300	5,708	4% 64% 13% 19%	1,735 89%	138.7	#CBC02
(Max Timber, No Below Cost)											
EFFECT OF NO BELOW COST CONSTRAINT	-0.0	-0.0	-0.0	-0.0	-0.0						#CBS02
EFFECT OF NON-DECLINING REVENUE CONST.	-235.0	-35.4	-12.7	-9.0	-13.7						#CRV02
EFFECT OF VC 4 DIFFICULT CONSTRAINT	+59.5	-47.2	-11.6	-14.3	-21.3						#CVD02
EFFECT OF ISOLATED OPERABILITY CONSTRAINT	+71.7	-42.2	-16.4	-5.6	-20.2						#CIS02
EFFECT OF 7% OF ASQ FROM DIFF. OPERABILITY	-2.9	-0.0	-0.0	-0.0	-0.0						#CDF02
EFFECT OF 30% OF ACRES HARVESTED FROM VC 4	-15.6	-10.3	-3.4	-4.4	-2.5						#C3002
ORIGINAL RUN WITH ALL ADDITIONAL CONSTRAINTS	217.8	381.8	61.8	208.4	111.6	9,600	7,031	26% 40% 24% 10%	1,535 79%	154.8	#CV401
ORIGINAL RUN, **ALTERNATIVE D**	419.1	554.7	119.2	261.7	173.8	29,300	6,348	0% 66% 15% 19%	1,941 98%	136.9	
(Max Timber)											
EFFECT OF NO BELOW COST CONSTRAINT	-0.0	-0.0	-0.0	-0.0	-0.0						#DBS02
EFFECT OF NON-DECLINING REVENUE CONST.	-262.5	-41.6	-15.2	-13.4	-13.0						#DRV02
EFFECT OF VC 4 DIFFICULT CONSTRAINT	+63.3	-50.0	-12.8	-13.8	-23.4						#DVD02
EFFECT OF ISOLATED OPERABILITY CONSTRAINT	+73.7	-38.4	-14.5	-5.1	-18.8						#DIS02
EFFECT OF 7% OF ASQ FROM DIFF. OPERABILITY	-2.7	-0.0	-0.0	-0.0	-0.0						#DDF02
EFFECT OF 30% OF ACRES HARVESTED FROM VC 4	-10.3	-6.3	-1.0	-4.5	-0.8						#D3002
ORIGINAL RUN WITH ALL ADDITIONAL CONSTRAINTS	246.2	396.8	62.3	209.1	125.4	15,800	7,133	13% 33% 47% 7%	1,595 80%	152.9	#DAL02

Table B-21 (continued)
Sensitivity Analysis Of Additional Constraints Considered For Alternatives

	PRESENT NET VALUE	TOTAL ASQ	CHATHAM ASQ	KETCHIKAN ASQ	STIKINE ASQ	NET TIMBER REVENUE	AVERAGE SUPPLEMENTAL FUNDING	DISTRIBUTION OF ACRES CLEARCUT VC4 VC5 VC6 VC7	SUITABLE ACRES SCHEDULED	AVERAGE LOGGING COST	
ORIGINAL RUN, **ALTERNATIVE P**	99.3	442.7	78.5	226.3	137.9	3,800	8,809	16% 59% 20% 5%	1,655 89%	141.3	#PND02
(Max Timber, No Below Cost, Nondeclining Rev.)											
EFFECT OF NO BELOW COST CONSTRAINT	-0.0	-0.0	-0.0	-0.0	-0.0						#PBS02
EFFECT OF NON-DECLINING REVENUE CONST.	-225.7	-34.8	-14.6	-7.3	-12.9						#PRV02
EFFECT OF VC 4 DIFFICULT CONSTRAINT	+54.4	-45.1	-12.3	-13.6	-19.2						#PVD02
EFFECT OF ISOLATED OPERABILITY CONSTRAINT	+66.2	-41.7	-16.9	-5.3	-19.5						#PIS02
EFFECT OF 7% OF ASQ FROM DIFF. OPERABILITY	-2.6	-0.2	-0.2	-0.0	-0.0						#PDF02
EFFECT OF 30% OF ACRES HARVESTED FROM VC 4	-15.9	-12.6	-5.7	-4.6	-2.3						#P3002
ORIGINAL RUN WITH ALL ADDITIONAL CONSTRAINTS	211.0	353.8	54.9	194.1	104.8	7,200	6,406	30% 38% 22% 10%	1,431 77%	152.6	#PAL02

Table B-22

Alternative A Using A Comparable Maximum Timber Objective Function

	PRESENT NET VALUE (MM$)	TOTAL ASQ (MMBF)	CHATHAM ASQ (MMBF)	KETCHIKAN ASQ (MMBF)	STIKINE ASQ (MMBF)
ALTERNATIVE A	297.9	340.8	63.5	162.0	115.3
(Max Timber)					
EFFECT OF NO BELOW COST CONSTRAINT	-0.0	-0.0	-0.0	-0.0	-0.0
EFFECT OF NON-DECLINING REVENUE CONST.	-153.2	-27.9	-6.5	-8.1	-13.3
EFFECT OF VC 4 DIFFICULT CONSTRAINT	+31.8	-30.2	-6.8	-8.5	-14.9
EFFECT OF ISOLATED OPERABILITY CONSTRAINT	+39.3	-24.7	-7.5	-3.1	-14.1
EFFECT OF 7% OF ASQ FROM DIFF. OPERABILITY	-2.2	-0.1	-0.0	-0.0	-0.1
EFFECT OF 30% OF ACRES HARVESTED FROM VC 4	-8.9	7.6	-2.8	-2.7	-2.1
ORIGINAL RUN WITH ALL ADDITIONAL CONSTRAINTS	157.8	249.2	32.3	135.3	81.6

Table B-23

Additional Sensitivity Tests On Alternative P

	PRESENT NET VALUE (MM$)	TOTAL ASQ (MMBF)	CHATHAM ASQ (MMBF)	KETCHIKAN ASQ (MMBF)	STIKINE ASQ (MMBF)
ALTERNATIVE P	84.7	442.7	78.5	226.3	137.9
(Max Timber, No Below Cost, Nondeclining Rev.)					
TEST WITH DISPERSION CHANGED TO 20% DISTURBANCE OVER 20 YEARS.	83.2	437.9	77.7	226.3	133.9
TEST WITH MEETING ALL INVENTORIED VQO's	76.6	438.4	78.5	226.3	133.6
TEST WITH USING HISTORIC BID VALUES RATHER THAN MIDDLE MARKET TIMBER VALUES	1.3	121.7	12.2	80.8	28.7

Selection of Final Constraints.

Following constraint sensitivity analysis and a review of the FORPLAN solutions, the no-below-cost and non-declining revenue (proxy) constraints were selected for incorporation into all of the alternatives. The no-below-cost constraint was selected because of the national interest in the below-cost issue and the Chief's policy on the issue. The non-declining revenue constraint was selected for a variety of reasons. Its selection was made because of its ability to "proxy" many other issues and management concerns. The non-declining revenue constraint tended to spread the harvest among the timber volume classes (reduce disproportionate harvest of volume greater than 20 mbf/acre).

Constraints Applied to each Alternative. The selection of no-below cost and non-declining revenue constraints marked the end of the constraint analysis and development phase. The final objective functions and constraints selected for each alternative are:

Alternative A.

Objective Function

Maximum Timber with Maximum PNV rollover

Constraints

All previously specified Management Requirements (MRs)

All previously specified Timber Policy Constraints

All previously specified Minimum Implementation Requirements

Meet long term sale volume requirements

Upper limit on precommercial thinning to 1,000 acres on the Chatham Area, 2,900 acres on the Stikine Area, and 2,400 acres on the Ketchikan Area.

Positive net timber revenue

Constraint to insure harvest of volume classes 6 and 7 (Strata C and D) combined in each of the TLMP Management Areas that fall within Allotment B, H, A-1, and Kuiu Islnd for APC until 2011 and Allotment E, F, and G on KPC until 2004.

Non-declining net timber revenue constraint

Alternative B.

Objective Function

Maximum Timber with Maximum PNV rollover

Constraints

All previously specified Management Requirements (MRs)

All previously specified Timber Policy Constraints

All previously specified Minimum Implementation Requirements

Meet long term sale volume requirements

Upper limit on precommercial thinning to 1,000 acres on the Chatham Area, 2,900 acres on the Stikine Area, and 2,400 acres on the Ketchikan Area.

Positive net timber revenue

Constraint to insure harvest of volume classes 6 and 7 (Strata C and D) combined in each of the TLMP Management Areas that fall within Allotment B, H, A-1, and Kuiu Islnd for APC until 2011 and Allotment E, F, and G on KPC until 2004.

Non-declining net timber revenue constraint

Alternative C.

Objective Function

Maximum Timber with Maximum PNV rollover

Constraints

All previously specified Management Requirements (MRs)

All previously specified Timber Policy Constraints

All previously specified Minimum Implementation Requirements

Meet long term sale volume requirements

Upper limit on precommercial thinning to 1,000 acres on the Chatham Area, 2,900 acres on the Stikine Area, and 2,400 acres on the Ketchikan Area.

Positive net timber revenue

Constraint to insure harvest of volume classes 6 and 7 (Strata C and D) combined in each of the TLMP Management Areas that fall within Allotment B, H,

A-1, and Kuiu Islnd for APC until 2011 and Allotment E, F, and G on KPC until 2004.

Non-declining net timber revenue constraint

<u>Alternative D.</u>

Objective Function

Maximum Timber with Maximum PNV rollover

Constraints

All previously specified Management Requirements (MRs)

All previously specified Timber Policy Constraints

All previously specified Minimum Implementation Requirements

Meet long term sale volume requirements

Upper limit on precommercial thinning to 1,000 acres on the Chatham Area, 2,900 acres on the Stikine Area, and 2,400 acres on the Ketchikan Area.

Positive net timber revenue

Constraint to insure harvest of volume classes 6 and 7 (Strata C and D) combined in each of the TLMP Management Areas that fall within Allotment B, H, A-1, and Kuiu Islnd for APC until 2011 and Allotment E, F, and G on KPC until 2004.

Non-declining net timber revenue constraint

<u>Alternative P.</u>

Objective Function

Maximum Timber with Maximum PNV rollover

Constraints

All previously specified Management Requirements (MRs)

All previously specified Timber Policy Constraints

All previously specified Minimum Implementation Requirements

Meet long term sale volume requirements

Upper limit on precommercial thinning to 1,000 acres on the Chatham Area, 2,900 acres on the Stikine Area, and 2,400 acres on the Ketchikan Area.

Positive net timber revenue

Constraint to insure harvest of volume classes 6 and 7 (Strata C and D) combined in each of the TLMP Management Areas that fall within Allotment B, H, A-1, and Kuiu Islnd for APC until 2011 and Allotment E, F, and G on KPC until 2004.

Non-declining net timber revenue constraint

Ten-year timber sale schedule specified by management area.

Table B-24 summarizes the constraints and land allocations that were selected and modeled into FORPLAN for each alternative.

Table B-24
FORPLAN Specifications By Alternative As Displayed In The Environmental Consequences

	Alt. A	Alt. B	Alt. C	Alt. D	Alt. P
Objective Function	Max Timber	Max Timber	Max Timber	Max Timber	Max Timber
Mgt. Requirements	All	All	All	All	All
Timber Policy Constraints	All	All	All	ALl	ALl
Minimum Implementation Requirements	All	All	All	All	All
Meet Long Term Sale Volume Requirements	Yes	Yes	Yes	Yes	Yes
Upper Limit On Precommercial Thinning					
Chatham	1,000 ac.	1,000 ac.	1,000 ac.	1,000 ac.	1,000 ac.
Stikine	2,900 ac.	2,900 ac.	2,900 ac.	2,900 ac.	2,900 ac.
Ketchikan	2,400 ac.	2,400 ac.	2,400 ac.	2,400 ac.	2,400 ac.

Table B-24 (cont.)
FORPLAN Specifications By Alternative As Displayed In The Environmental Consequences

	Alt. A	Alt. B	Alt. C	Alt. D	Alt. P
Positive Net Timber Revenue Constraint	Yes	Yes	Yes	Yes	Yes
Non-declining Net Revenue Constraint	Yes	Yes	Yes	Yes	Yes
Constraint to Insure Harvest Of Volume Class 6 & 7 is Proportional To Existence Within Long Term Contract Boundaries	Yes	Yes	Yes	Yes	Yes
Ten Year Timber Sale Schedule Specified	No	No	No	No	Yes
No Timber Harvest Due To Research Natural Area LUD	6,000 ac.	10,000 ac.	4,000 ac.	0 ac.	4,000 ac.
No Timber Harvest Due To Primitive Recreation LUD	339,000 ac.	362,000 ac.	155,000 ac.	132,000 ac.	161,000 ac.
No Timber Harvest Due to Old Growth Habitat LUD	187,000 ac.	7,000 ac.	58,000 ac.	9,000 ac.	45,000 ac.
No Timber Harvest Due To Beach Fringe LUD	161,000 ac.	153,000 ac.	263,000 ac.	0 ac.	213,000 ac.
No Timber Harvest Due To Semi-Prim. Recreation LUD	489,000 ac.	479,000 ac.	124,000 ac.	403,000 ac.	188,000 ac.
No Timber Harvest Due To Special Interest Area LUD	27,000 ac.	33,000 ac.	1,000 ac.	2,000 ac.	27,000 ac.
No Timber Harvest Due To Wild, Scenic & Recreation Rivers	95,000 ac.	56,000 ac.	0 ac.	8,000 ac.	34,000 ac.
No Timber Harvest Due To Other Areas LUD	4,000 ac.	4,000 ac.	0 ac.	5,000 ac.	33,000 ac.
Reduced Intensity Timber Harvest Due To Scenic Viewshed	323,000 ac.	347,000 ac.	183,000 ac.	48,000 ac.	222,000 ac.

Table B-24 (cont.)
FORPLAN Specifications By Alternative As Displayed In The Environmental Consequences

	Alt. A	Alt. B	Alt. C	Alt. D	Alt. P
Individual Tree Selection Harvest Due To Scenic Viewshed LUD	57,000 ac.	50,000 ac.	35,000 ac.	15,000 ac.	52,000 ac.
Reduced Intensity Timber Harvest Due To Modified Landscape LUD	251,000 ac.	128,000 ac.	216,000 ac.	144,000 ac.	251,000 ac.
Reduced Intensity Timber Harvest Due To Stream and Lake Protection LUD	46,000 ac.	54,000 ac.	72,000 ac.	0 ac.	67,000 ac.

Results of Alternatives

Introduction

With the selection of constraints complete, the final runs of the alternatives were be made. The results of the alternatives under all congressional and administrative constraints, Management Requirement constraints, timber policy constraints, and operational constraints (Appendix B, Formulation of Alternatives) are shown below.

ASQ and Suitable Acres. Table B-25 shows the Allowable Sale Quantity and suitable-scheduled acres for each alternative. ASQ is the amount of timber that can be cut on a decadal basis in perpetuity. Suitable-scheduled acres is the amount of land required to maintain the ASQ volume for perpetuity.

Table B-25.
Allowable Sale Quantity and Suitable-Scheduled Acres

Alternative	Admin Area	ASQ (MMBF/yr)	Suitable-Scheduled Acres (Thousands)
Alternative A	CHT	44.0	193.9
	KTN	147.3	598.5
	STK	106.9	380.6
	Total	**298.8**	**1,173.0**
Alternative B	CHT	59.0	256.1
	KTN	162.3	661.4
	STK	121.8	442.3
	Total	**343.1**	**1,359.8**
Alternative C	CHT	77.0	319.4
	KTN	230.6	887.9
	STK	143.3	525.1
	Total	**450.9**	**1,732.4**
Alternative D	CHT	79.9	340.3
	KTN	232.7	893.2
	STK	159.5	584.9
	Total	**472.1**	**1,818.4**
Alternative P	CHT	70.0	289.1
	KTN	214.5	824.0
	STK	133.7	488.3
	Total	**418.2**	**1,601.4**

Acres Harvested per Decade

FORPLAN was used to schedule timber harvest over the 160 year planning horizon. The acres harvested by decade for each Management Area and alternative is presented in Table B-26. Total acres harvested is also shown by Administrative Area and Forest.

Table B-26

Acres Harvested By Decade in Alternative A

Mgt							Decade									
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	0	119	0	99	20	0	0	0	0	0	0	100	0	0	0	0
C05	140	20	0	40	40	299	0	0	0	0	100	20	140	0	0	0
C06	0	0	80	159	239	0	0	0	0	0	0	0	0	0	0	0
C07	180	0	60	1876	479	3831	0	0	0	0	0	0	180	0	0	0
C10	135	323	238	79	60	0	543	0	0	0	0	697	39	0	0	80
C12	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
C13	0	440	4590	0	1365	0	4803	0	0	0	0	240	0	0	4269	0
C14	273	3610	273	80	48	1122	2359	0	0	0	0	1240	273	2080	273	0
C15	0	0	21	0	0	0	20	0	0	0	0	41	0	0	0	21
C18	0	400	1614	1175	4926	999	0	0	0	0	0	0	0	0	0	1439
C19	0	880	1300	2075	3385	1376	0	0	0	0	450	549	0	0	620	520
C21	1283	561	359	160	0	2922	2169	0	0	20	0	420	0	1063	0	0
C25	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	200
C27	202	0	0	80	20	0	80	17	0	0	400	22	180	0	0	0
C29	559	0	11	99	0	20	160	220	0	29	69	0	508	0	0	11
C30	3654	0	0	3799	1361	3499	0	6161	0	104	255	0	3399	0	0	320
C31	1640	1120	4377	2627	2855	780	2439	340	204	57	4337	220	1558	181	0	1041
C32	505	0	120	580	900	0	361	1140	0	34	25	0	480	0	0	0
C34	226	1460	0	659	319	2277	5365	0	1137	149	220	50	0	1417	0	0
C37	5107	3736	0	5982	406	4195	6272	3105	7878	196	2038	1223	3175	3549	0	1178
C40	667	0	1453	145	1536	0	0	13	1173	1016	1106	1112	0	0	0	1436
C41	1307	0	3704	280	1360	520	0	0	53	4198	0	1307	0	0	1561	2142
C43	2086	973	1535	647	393	0	300	0	409	1462	0	811	0	2248	1475	0
C44	464	0	199	882	0	0	556	35	0	2137	0	464	0	0	0	59
C45	0	0	0	0	80	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	34	0	420	0	0	0	0	180	0	0	0	0	0	34
C48	289	0	0	160	864	0	40	80	0	72	8	1045	0	0	0	0
C53	0	2789	0	1275	304	0	0	357	0	0	0	236	581	0	520	274
C54	0	694	58	41	0	0	0	441	0	0	0	0	0	0	993	0
C55	0	140	0	220	0	0	0	0	0	0	0	340	0	0	0	0
C56	0	81	0	20	0	0	0	0	0	0	0	0	0	0	61	0
Chatham	18717	17346	20126	23239	21480	21860	25467	11909	10854	9654	9008	10137	10513	10538	9772	8755

Table B-26 (continued)

Acres Harvested By Decade in Alternative A

Mgt								Decade								
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
K01	6735	3259	1993	0	2916	2278	180	5640	1775	0	4598	3905	5035	1196	1347	0
K03	0	6695	3948	4045	2504	6281	863	120	0	0	0	14624	6695	0	7655	1520
K04	1493	615	906	59	0	0	0	0	2952	0	0	388	1720	0	965	0
K05	10047	1124	98	1286	0	0	0	1084	0	15627	1548	4178	5444	0	701	683
K06	180	0	1169	0	799	190	0	0	0	0	0	180	0	0	1169	799
K07	6778	7205	10920	0	1717	741	570	662	0	0	26648	4572	7310	8515	2405	0
K08	0	7700	11065	1581	4718	3221	100	220	0	0	10599	2260	5440	7519	6446	0
K09	590	5167	11630	4549	2740	2280	0	19040	3256	0	0	3492	4945	4156	12123	0
K10	500	2260	5693	1380	1241	420	280	180	0	0	2716	3314	2646	2202	4871	0
K11	10311	362	721	2022	0	80	0	261	4582	9657	365	2831	7476	0	1706	1037
K14	2146	2949	0	14915	4749	3641	520	660	0	0	0	2842	4570	955	4115	15079
K15	22	1357	440	3961	1240	3920	260	480	0	0	0	3471	1127	2579	3122	0
K17	3806	460	1899	271	2258	2480	140	0	280	9385	0	0	0	4266	2990	0
K18	2648	1436	4408	2999	3	4740	400	160	741	5505	0	0	1006	3078	5074	4655
K19	0	952	0	1714	602	100	0	20	0	40	0	0	0	100	852	2256
K20	815	86	0	4110	3510	859	0	0	0	884	0	0	73	1809	0	6639
K21	833	27	4794	1423	2853	820	20	40	0	1716	0	0	133	727	5757	1315
K22	413	85	0	4852	5561	6849	978	818	0	480	0	0	14	1901	0	8410
K24	2486	636	0	1764	2462	3745	1062	861	1719	1765	0	0	721	895	1506	5508
K25	0	1461	0	4666	3082	860	0	0	0	60	0	0	0	1461	0	8228
K28	100	859	0	2339	2202	607	40	355	0	0	0	0	0	879	80	4625
K29	0	0	0	539	4016	3576	4680	0	0	200	0	0	0	539	0	3776
K30	480	0	0	499	4594	4805	8410	60	179	0	0	0	0	979	0	4334
K32	5359	6750	2663	803	200	3386	10771	2017	8650	3227	0	0	4564	8348	2683	0
K34	154	65	0	0	40	100	1380	260	0	0	0	0	80	140	40	0
K35	0	3616	1200	940	540	180	21994	140	5319	0	0	0	320	4236	1200	0
K39	153	106	0	473	887	741	3575	2298	0	680	0	0	20	713	887	0
K41	0	60	0	0	0	380	922	0	0	280	0	0	0	60	0	0
	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Ketchkn	56049	55292	63547	61190	55434	57280	57145	35376	29453	49506	46474	46057	59339	57253	67694	68864

Table B-26 (continued)

Acres Harvested By Decade in Alternative A

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S01	807	0	4569	681	2065	1233	3679	0	107	0	928	240	0	3011	0	106
S02	0	0	100	0	0	0	38	0	0	0	0	0	0	100	0	0
S04	5823	11942	2217	4647	3950	9301	1020	4296	17639	416	5425	7400	11480	236	2336	0
S09	3798	5384	1965	5729	2439	7050	140	2258	0	0	834	4595	4953	345	4095	1093
S10	1061	0	878	6409	5897	2212	7081	2742	80	0	1061	0	0	0	2011	4267
S11	2652	0	1719	4520	8150	800	4648	7666	0	0	560	2092	0	0	1194	2283
S12	60	0	40	221	20	158	40	0	0	0	0	80	0	0	0	0
S13	1143	0	580	1302	6432	1959	1128	1648	104	0	0	1642	0	0	0	2333
S14	0	0	0	189	189	0	0	0	0	0	0	0	0	0	0	0
S16	620	16	422	2625	620	2622	1040	100	3742	0	620	0	16	422	2625	0
S17	1400	5546	1451	2772	1861	300	2763	1038	120	7123	1400	0	656	1411	2772	4889
S18	100	280	51	0	140	0	461	40	328	0	0	1238	0	280	100	0
S19	2198	6453	0	2616	6113	4551	1034	10214	120	6060	6845	0	6453	100	1098	1034
S20	2892	0	1688	3109	747	4152	2016	0	0	0	0	3375	0	0	0	222
S21	315	208	0	0	181	0	0	0	100	0	0	1052	0	121	315	87
S22	120	215	24	0	100	0	0	0	320	0	0	632	40	240	80	0
S23	6389	3061	7210	2739	3005	1958	3305	0	440	0	2343	1061	0	6068	5508	3061
S25	3883	955	8200	942	720	2639	7362	760	200	3741	1060	0	0	7321	3205	955
S26	3191	3819	3191	0	0	2020	1759	0	0	0	40	1279	2009	3091	3	3819
S31	668	766	1726	540	0	800	920	0	0	0	80	60	294	1066	313	766
S33	1910	2235	1903	340	1060	1319	600	0	680	0	120	0	358	1483	1551	2235
S35	821	0	1945	640	440	381	1890	680	77	3521	821	60	0	1286	240	0
Stikine	39851	40880	39879	40021	44129	43455	40924	31442	24057	20861	22137	24806	26259	26581	27446	27150
TOTAL	114617	113518	123552	124450	121043	122595	123536	78727	64364	80021	77619	81000	96111	94372	104912	104769

Table B-26 (continued)

Acres Harvested By Decade in Alternative B

Mgt							Decade									
Area	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
C03	160	600	260	981	1415	0	120	0	0	0	0	160	160	0	0	240
C06	0	0	239	0	239	0	0	0	0	0	0	0	0	0	0	0
C07	180	0	718	1358	479	2889	1118	0	0	0	0	0	180	0	0	0
C10	0	459	278	100	0	0	0	1358	0	0	0	285	0	451	0	0
C12	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0
C13	0	600	6111	1204	7629	1051	8236	0	0	40	0	240	0	0	5209	0
C14	502	1529	2124	181	0	2313	1335	0	0	0	0	1239	502	0	2124	55
C15	0	0	1	0	0	0	0	40	0	0	41	0	0	0	0	1
C18	0	400	2107	724	1552	4332	0	160	0	0	0	0	180	0	0	1439
C19	0	880	875	2267	616	4036	342	1360	0	0	0	0	0	0	620	520
C21	1283	561	359	120	80	2186	2906	0	0	20	0	420	1063	0	0	341
C27	202	382	0	460	240	0	661	600	195	0	22	42	180	0	340	0
C28	162	4700	260	2604	2483	0	1982	600	3409	0	42	1075	120	3465	0	240
C29	1954	1057	308	2100	0	540	1299	360	0	0	1736	95	1778	962	0	308
C30	2430	2040	20	900	4941	4379	0	1028	6333	127	170	142	2260	909	988	0
C31	1727	1200	2199	3480	4044	780	2439	4566	32	253	86	220	1641	99	1041	0
C32	442	336	120	917	602	0	501	0	1300	61	22	16	420	320	0	0
C34	226	1852	337	939	320	0	6543	0	2	1534	0	282	0	1797	0	0
C37	6545	2066	1099	5820	590	3851	5426	1618	2946	6308	2280	1904	4416	1962	0	459
C39	782	3	411	60	0	459	0	0	0	20	0	23	0	837	335	0
C40	667	0	1515	1105	593	0	0	40	0	0	2040	2389	0	0	0	1515
C41	1307	0	3757	1441	200	520	0	0	0	2925	1272	1307	0	0	112	3645
C43	3799	18	1128	924	175	0	301	0	0	1462	0	834	32	2950	742	386
C44	485	0	196	1061	0	0	781	0	0	0	2524	485	0	0	0	156
C45	0	0	0	0	80	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	50	0	420	0	0	0	0	0	180	0	0	0	0	50
C48	289	0	344	132	891	0	40	0	0	92	8	1065	0	0	0	384
C53	1336	3341	1270	1702	388	0	0	4226	0	0	1336	1381	1144	0	1075	1901
C54	0	767	0	468	0	0	0	299	0	0	0	0	0	0	767	368
C55	0	140	0	153	185	0	0	296	0	0	0	0	0	0	0	140
C56	20	30	20	20	0	0	0	10	0	0	20	0	0	0	41	0
Chatham	24498	22961	26106	31221	28162	27356	34030	16561	14217	12842	11779	13604	14076	13752	13394	12148

Table B-26 (continued)

Acres Harvested By Decade in Alternative B

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K01	7153	2734	3067	223	3976	4257	180	7611	0	3929	0	5114	5991	2092	2141	0
K03	0	6037	3948	7680	1202	6519	1023	120	0	0	0	18953	6037	742	8599	3750
K04	1628	641	643	2209	0	241	0	402	3074	0	0	423	1846	482	1567	803
K05	10049	0	97	2167	283	0	0	1084	0	15627	0	5728	4321	1145	417	986
K07	10352	13470	9342	0	3016	1102	60	520	0	0	34848	7453	14394	7570	3869	0
K08	401	9739	14196	2555	6385	4420	120	4311	0	0	7307	4530	6780	8794	8513	0
K09	340	8495	12238	810	2740	2280	0	13318	5344	3679	1222	1457	8835	4599	8549	0
K10	552	2332	5570	1380	1338	420	182	180	0	0	6043	0	2757	2118	4929	0
K11	9437	5	1257	2445	0	80	0	261	6788	7721	0	2925	6517	355	2242	1105
K14	0	1380	1282	14457	8109	3699	440	660	0	0	0	2960	1380	2261	1956	19591
K15	60	1899	479	7563	1760	3020	480	540	0	0	1571	2172	1874	3180	4021	2161
K17	3886	500	1919	591	899	4675	220	0	280	10275	0	0	0	4386	2510	0
K18	2551	1494	4140	2981	0	4407	340	80	741	5548	0	0	969	3076	4777	4728
K19	0	982	0	1684	542	100	0	20	0	40	0	0	0	100	0	3109
K20	836	144	0	4754	3806	1275	0	0	0	884	0	0	75	2027	0	7438
K21	809	1070	6549	4597	2618	3795	760	480	0	1696	0	0	129	1750	10826	1179
K22	362	56	0	399	535	1300	418	179	0	20	0	0	43	513	0	756
K24	1716	1447	0	2184	2543	3846	1061	862	1742	1781	0	0	721	1404	661	6487
K25	0	1642	0	5744	3846	1820	120	802	0	260	0	0	0	1642	0	9568
K28	80	820	0	2378	1680	742	40	0	0	0	0	0	0	900	0	4398
K29	0	0	0	539	3777	3857	4680	0	0	200	0	0	0	539	0	3777
K30	480	0	0	780	6585	4865	6479	60	179	0	0	0	440	820	0	6531
K32	9938	713	4595	0	2381	3987	15341	5478	9205	2516	0	0	3308	7344	6776	0
K34	0	0	0	0	247	80	772	60	0	0	0	0	0	0	20	227
K35	0	3761	1200	0	1480	180	21249	140	5300	0	0	0	340	3421	2140	0
K39	153	226	0	0	1959	979	7619	4996	0	700	0	0	20	360	1959	0
K41	0	60	0	0	0	360	481	0	0	280	0	0	0	60	0	0
Ketchkn	60783	59647	70522	68120	61707	62306	62065	42164	32653	55156	50991	51715	66777	61680	76472	76594

Table B-26 (continued)

Acres Harvested By Decade in Alternative B

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S01	779	0	4221	819	2065	1473	3679	0	80	0	957	0	0	2874	244	0
S02	0	0	0	100	0	0	38	0	0	0	0	0	0	0	100	0
S04	10755	9743	3103	1033	9169	5061	0	259	18980	1305	6093	10036	9939	238	0	125
S07	0	0	3644	483	0	3752	3800	392	81	0	221	262	0	2115	0	0
S08	0	0	1522	0	0	1340	2580	0	0	0	0	200	0	1322	0	0
S09	0	2388	2044	11448	2777	7145	0	0	1959	0	291	1524	2197	0	10888	0
S10	2005	0	1780	4833	4923	1959	1038	10322	80	0	1061	944	0	922	2041	2452
S11	3388	0	1759	4139	6938	1960	2144	6746	4748	0	639	2749	0	0	0	3319
S12	60	0	61	321	20	360	518	60	20	0	0	80	0	0	0	321
S13	0	0	2282	5540	4422	0	13500	7065	0	0	0	1841	0	0	0	5266
S14	0	0	0	219	219	0	0	0	0	0	0	0	0	0	0	0
S16	1380	2682	3708	32	3181	1441	6381	0	0	3460	1380	40	2682	3568	32	0
S17	1742	8572	1642	94	2241	780	3023	0	0	7085	1742	120	3407	1402	94	5165
S18	80	280	120	0	100	220	0	60	0	0	0	940	0	280	80	0
S19	2198	13571	120	4529	6272	5575	0	0	0	3985	9954	120	4540	100	3011	9031
S20	0	0	583	3660	664	0	5982	4442	0	0	0	543	0	0	0	263
S21	403	121	60	0	181	40	0	0	0	0	0	2599	0	121	403	0
S22	129	230	40	0	100	280	0	0	0	0	0	672	0	280	80	0
S23	12895	1781	2469	3647	4079	4668	0	180	180	0	416	3469	3756	2855	8117	0
S25	4737	3666	4347	2824	720	3634	1985	6599	0	3741	1100	200	2743	3447	3845	2318
S26	3221	951	5837	0	0	4398	0	1534	0	0	40	1400	7	5737	1914	951
S31	435	1020	1015	609	0	1608	0	111	0	0	80	60	375	944	0	920
S33	720	500	1903	340	1060	1999	0	3967	0	0	120	0	0	1983	720	0
S35	961	1120	3146	460	1781	661	5708	0	0	4217	961	0	380	1926	0	740
Stikine	45888	46625	45406	45130	50912	48354	50376	41737	26128	23793	25055	27799	30026	30114	31569	30871
TOTAL	131169	129233	142034	144471	140781	138016	146471	100462	72998	91791	87825	93118	110879	105546	121435	119613

Table B-26 (continued)

Acres Harvested By Decade in Alternative C

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	120	0	380	2328	3046	2736	520	80	0	0	120	0	0	0	0	620
C06	0	0	439	0	0	139	300	0	0	0	0	0	0	0	0	0
C07	0	0	838	1232	1118	3755	120	0	0	0	0	0	0	0	0	180
C10	0	0	104	0	0	0	100	100	0	0	0	104	0	0	0	0
C13	280	0	6314	0	8041	2518	0	0	0	0	320	0	0	0	5118	273
C14	2912	1578	9880	2495	6358	3908	0	0	0	0	2912	1658	0	0	8624	2467
C15	0	0	60	0	0	0	0	0	0	0	1282	0	60	0	0	0
C18	0	0	0	2126	3831	1958	820	700	0	0	0	0	0	0	0	1519
C19	0	0	0	2217	2732	1268	1680	2739	0	0	0	0	0	0	0	1180
C21	140	640	3739	2844	6627	4664	5044	0	0	0	301	1238	200	0	2724	0
C25	0	0	0	0	0	0	80	0	0	0	0	0	0	0	0	0
C27	12	731	156	941	59	240	0	0	540	0	12	251	0	320	156	160
C28	10	5992	1547	2822	0	3483	521	315	619	1369	10	2971	0	4088	619	240
C29	2693	2693	535	0	0	840	816	480	0	919	242	1141	2985	668	0	623
C30	0	6086	517	5399	0	3220	4678	698	6525	0	0	2645	0	2861	473	0
C31	1976	2000	4119	8219	0	1560	6338	2870	2249	241	1610	767	366	1432	280	0
C32	1747	0	360	793	6	680	740	100	0	1391	701	240	1045	0	0	0
C34	220	2558	220	1168	339	0	0	0	139	60	862	556	213	1542	0	539
C37	9152	1942	1578	0	3642	849	5951	1198	0	11557	3381	1076	6451	0	0	0
C39	629	894	414	929	0	80	0	0	0	0	100	45	624	867	0	0
C40	0	2884	1124	0	0	0	544	20	2422	0	0	1749	1252	0	0	2588
C41	5922	142	0	540	0	0	1702	0	783	0	3539	1721	0	4204	0	0
C43	5219	897	424	2820	71	80	1045	14	0	0	1863	183	4169	2048	13	25
C44	509	2002	1341	224	0	0	475	0	2695	0	0	1480	649	0	23	3054
C45	0	23	0	0	0	0	76	0	0	0	0	0	0	0	0	23
C46	0	118	46	0	0	0	321	0	134	0	33	12	0	0	0	165
C48	253	982	234	0	0	0	506	60	271	63	7	541	635	0	0	757
C53	0	932	0	715	0	0	5934	11203	2072	1462	0	0	0	0	0	1648
C54	0	0	0	2217	0	0	0	3659	0	0	0	0	0	0	0	2217
C55	0	0	0	0	0	380	279	999	0	0	0	0	0	0	0	0
C56	14	0	0	0	0	0	200	126	0	14	0	0	0	0	0	0
Chatham	31808	33094	34369	40029	35870	32358	38790	25361	18449	17076	17295	18378	18649	18030	18030	18278

Table B-26 (continued)

Acres Harvested By Decade in Alternative C

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K01	8382	4248	323	5028	4533	3996	200	944	7585	3826	399	8335	3897	1562	3673	1355
K03	1405	7877	3527	3936	3804	11389	1144	120	0	0	10365	13011	6376	0	9307	337
K04	2311	1783	0	2889	0	241	0	502	2471	961	606	1344	1821	322	1425	1464
K05	10927	1327	0	1305	0	0	0	1084	2061	14099	6228	2942	2939	144	602	703
K06	0	0	0	18	0	0	0	20	0	60	0	0	0	0	0	18
K07	18789	5845	5928	3907	3176	1021	60	8390	0	0	28876	14327	7057	5630	2436	3907
K08	4735	7484	18517	6681	4077	5181	320	12452	0	0	394	5741	6084	11806	4912	6681
K09	440	8934	9099	6908	1060	2420	160	4493	10862	7119	0	2322	7848	4946	6871	4312
K10	1304	2421	4650	3000	1482	501	0	240	0	0	6136	1304	2421	1732	4458	1460
K11	10364	1741	0	2789	0	723	0	281	3657	11144	3213	5481	2172	1239	1325	1464
K13	0	0	0	984	402	0	582	0	0	0	0	0	0	0	0	1245
K14	206	4673	100	5771	11714	13028	819	680	0	0	3261	560	3786	533	0	17265
K15	649	3289	920	0	5820	5540	480	620	0	0	0	5069	2609	0	968	5271
K17	1294	1904	5536	0	5912	3895	0	0	280	12661	55	0	2163	5396	2380	0
K18	2865	9039	10776	4366	3490	2662	0	960	841	6504	841	184	9798	3311	12075	1106
K19	0	742	3068	742	1324	220	1444	0	0	80	0	0	0	742	3068	1905
K20	351	1959	0	8526	2809	2509	0	0	0	923	31	0	1838	450	2787	7870
K21	880	7276	12864	7281	4837	3721	0	1220	0	2076	40	420	3236	9650	7319	5857
K22	733	3314	0	18557	998	10465	1629	918	0	500	0	0	3748	299	9337	8401
K24	2486	1081	4948	0	60	3922	1282	962	1742	1803	721	0	944	4565	2285	1358
K25	0	2822	6938	2825	2648	3745	260	0	0	300	0	0	0	5540	4220	6515
K28	100	2337	6260	2337	2123	3437	341	259	0	0	0	0	100	5377	3220	4936
K29	0	0	0	1079	11030	5199	12696	200	0	400	0	0	0	1079	0	10650
K30	422	0	0	1141	11185	3304	20059	60	840	0	0	0	422	1141	0	10425
K32	10018	5724	0	2561	761	720	21194	12619	11315	913	664	6124	4127	7388	40	0
K34	154	65	0	240	0	0	2938	940	0	0	14	140	65	240	0	0
K35	3681	1319	0	1020	600	200	16033	8614	5395	0	220	3461	119	2220	0	0
K39	267	132	0	2519	0	0	5713	12661	0	740	0	220	67	2631	0	0
K41	0	60	0	0	120	0	961	541	0	280	0	0	60	0	0	0
K44	1092	360	400	220	2740	1487	0	80	0	0	60	780	672	220	0	0
Ketchkn	83855	87756	93854	96630	86705	89526	88315	69860	47049	64389	62124	71765	74369	78163	82708	104505

Table B-26 (continued)

Acres Harvested By Decade in Alternative C

Mgt Area	1	2	3	4	5	6	7	Decade 8	9	10	11	12	13	14	15	16
S01	1020	0	2029	4010	3156	2769	5038	0	140	0	1020	0	0	820	3237	0
S04	16360	9821	4140	1132	8474	8412	0	259	17143	3052	7280	11358	11654	298	475	2039
S07	0	0	3940	987	0	5090	4710	0	81	0	161	402	0	2331	444	0
S08	0	0	1522	0	0	1340	2580	0	0	0	0	200	0	1322	0	0
S09	2388	0	2124	13725	3134	8788	0	0	1958	0	191	1664	2197	0	13045	0
S10	2987	681	440	4233	4958	2138	7108	3410	2361	0	681	2780	647	0	0	3894
S11	2749	259	360	4620	6937	431	3529	6263	7457	0	259	724	2384	0	0	3800
S12	60	0	20	38	20	0	19	0	0	0	0	80	0	0	0	38
S13	0	0	2021	7955	4378	0	7696	14279	0	0	0	2021	0	0	0	7455
S14	0	0	0	738	0	0	0	0	0	0	0	0	0	0	0	0
S16	2006	2476	4206	173	3262	1939	7140	0	0	4062	1641	58	2841	3988	173	0
S17	1837	9932	1550	550	1782	1581	3785	0	0	7629	599	1602	3945	1310	1789	4505
S18	204	475	140	0	220	240	0	501	300	0	0	1595	44	475	160	0
S19	4303	13904	120	2533	9153	2956	0	0	0	3573	9566	1060	4614	2183	3920	6165
S20	0	0	623	3254	665	0	2705	9341	0	0	0	583	0	0	0	262
S21	584	323	80	0	885	182	0	0	80	0	0	2679	0	323	584	0
S22	910	591	440	420	801	801	0	0	561	0	0	1561	129	591	661	0
S23	11040	7303	3927	3430	6411	5189	3059	220	380	280	1602	3245	6262	2072	3735	5360
S25	2883	6655	7132	2000	1560	0	5342	7682	0	4802	620	680	0	9580	2263	2277
S26	1730	0	7887	803	0	7881	128	6555	0	0	1841	260	9	3655	4515	0
S29	478	239	2437	639	1118	959	0	638	659	0	2401	189	0	399	478	0
S31	100	120	2682	620	0	2441	0	1400	0	0	180	0	0	2142	0	0
S33	780	500	2002	340	1459	1542	375	3388	720	0	140	0	0	2082	780	0
S35	902	1318	3646	580	1154	1987	5849	0	0	4456	902	178	400	1805	0	740
Stikine	53321	54597	53468	52780	59527	56666	59063	53936	31840	27854	29084	32919	35126	35376	36259	36535
TOTAL	168984	175447	181691	189439	182102	178550	186168	149157	97338	109319	108503	123062	128144	131569	136997	159318

Table B-26 (continued)

Acres Harvested By Decade in Alternative D

Mgt Area	1	2	3	4	5	6	7	Decade 8	9	10	11	12	13	14	15	16
C03	160	600	100	1357	1359	12	147	0	0	0	0	160	160	0	0	240
C05	0	0	0	20	20	0	180	0	0	0	0	0	0	0	0	20
C06	100	40	579	342	540	0	141	0	0	100	0	20	100	0	0	20
C07	0	0	878	935	4313	0	998	0	0	0	0	0	0	0	0	180
C10	0	1277	298	0	0	0	0	2272	0	0	0	1575	0	0	0	0
C12	0	859	0	0	0	2585	0	0	0	0	0	0	0	0	0	0
C13	0	721	6009	1663	1305	13421	10020	0	0	0	60	360	0	0	0	6009
C14	0	1529	2610	308	1191	1122	1359	0	0	0	0	1259	0	0	2590	86
C15	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
C17	338	0	0	1492	412	0	0	741	0	0	338	0	0	0	0	1825
C18	340	80	1099	1700	3915	0	0	1099	0	0	340	0	180	0	0	918
C19	700	180	500	3300	3419	0	0	2320	0	0	80	0	620	0	0	460
C20	724	919	0	0	0	0	0	0	0	0	3	919	0	0	721	0
C21	1074	4088	1500	1220	1539	2883	2565	1955	0	0	200	1147	1034	2281	0	0
C25	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	40
C27	564	24	151	0	740	0	661	0	540	0	84	24	631	0	0	0
C28	1112	5675	827	2235	0	2643	1490	0	2832	52	742	1800	369	3975	0	0
C29	6032	2059	1174	1067	3327	1281	2622	380	480	1900	571	213	5915	1104	760	895
C30	6036	14	217	4898	5389	968	6303	480	7298	571	436	14	5617	0	0	0
C31	230	2000	4060	6430	4131	1400	4321	3621	978	210	149	260	499	1900	0	1780
C32	1263	0	120	681	858	560	680	0	1319	140	80	0	1200	0	0	0
C33	0	40	0	540	0	460	661	0	0	0	0	40	0	0	0	540
C34	0	2666	300	287	1646	3113	8567	443	139	0	1220	439	300	2227	0	167
C37	2142	4730	3157	2815	4846	4212	5706	1278	340	5850	6671	928	2494	3802	1739	1630
C39	375	499	588	133	0	479	0	0	0	0	0	126	0	849	622	0
C40	1315	17	269	346	0	0	0	2421	2422	0	0	2851	0	0	206	269
C41	0	2002	4363	239	140	540	0	1662	783	0	2043	1679	0	1736	3050	1352
C43	1863	757	5722	783	300	381	0	1401	0	0	2677	1371	0	1193	6125	381
C44	145	178	0	136	0	0	0	1180	0	0	0	1742	0	0	36	0
C45	0	0	50	0	0	0	0	120	0	0	0	0	0	0	0	50
C46	0	0	148	20	211	0	0	420	134	0	0	34	0	0	20	220
C48	393	0	0	261	0	0	0	1205	271	0	69	885	0	0	141	0

Table B-26 (continued)

Acres Harvested By Decade in Alternative D

Mgt							Decade									
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C53	6371	321	0	4063	1420	0	0	4044	1313	10720	321	0	0	0	2595	7
C54	0	0	0	877	220	0	0	657	0	0	0	0	0	0	0	877
C55	180	0	0	75	343	0	0	359	0	180	0	0	0	0	0	0
C56	41	20	0	42	177	0	0	60	0	41	0	0	0	0	0	20
C57	146	60	0	62	0	0	0	160	0	180	60	0	0	0	62	0
C60	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0
C61	40	0	0	39	0	0	0	0	0	40	0	0	0	0	0	0
Chatham	31684	31355	34739	38366	41781	36060	46421	28299	18849	19984	16164	17846	19119	19067	18667	17986
K01	4530	4739	1541	1988	8575	4157	280	600	11547	0	0	4292	4978	0	2153	6382
K03	280	10057	4971	0	12772	9588	635	120	0	0	15884	5907	3308	11720	1341	5555
K04	3528	2998	0	1666	2287	321	0	562	4218	0	0	3528	789	2209	0	3953
K05	11018	1455	278	902	1167	40	0	1124	2896	14252	0	9243	1847	1833	27	1870
K06	419	0	0	4498	3576	1455	0	120	100	0	0	419	0	0	0	8074
K07	12889	9327	7320	9133	3974	1020	60	3090	0	0	31844	12889	9327	916	11456	7036
K08	1630	6739	12186	15257	3720	5038	240	12715	0	0	0	2122	6247	3508	13018	9458
K09	1040	4286	8712	5776	7187	2420	160	9974	12544	0	0	1040	4286	4348	4050	13196
K10	0	3117	5340	3397	1821	782	0	220	0	0	6739	0	2890	2826	4619	1518
K11	10034	5219	0	1666	1787	723	0	341	3839	12093	0	10034	963	4256	0	3453
K13	0	0	0	1226	101	0	1500	0	0	0	0	0	0	0	520	807
K14	2186	1316	0	2546	11181	14243	0	760	0	0	3160	962	2345	2722	0	9899
K15	0	597	1382	1581	6181	3439	0	640	0	0	0	3338	460	2578	402	4861
K17	3533	960	3961	0	4893	2338	0	0	280	12205	0	1178	3315	1663	2298	0
K18	2996	6294	12122	1108	3322	2424	0	680	901	6884	1041	814	7435	4826	7396	1108
K19	0	20	9	281	170	80	0	0	0	20	0	0	0	29	0	451
K20	627	1831	0	8558	118	2574	2464	0	0	943	0	340	546	1572	5574	2984
K21	1426	9458	10957	9489	4754	2719	0	600	0	2595	140	727	4247	7973	10457	6227
K22	2053	2934	0	10974	1358	11047	8473	918	0	659	0	260	2013	2714	8905	2068
K24	3338	1281	5668	0	120	4695	1322	1102	1631	2634	922	921	2776	3023	2645	1769
K25	587	3142	8642	3142	3231	4161	341	0	0	320	0	0	3729	2190	6757	7205

Table B-26 (continued)

Acres Harvested By Decade in Alternative D

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K26	1315	5	1771	2276	1421	1622	0	180	0	0	0	329	985	526	1249	3397
K28	1512	2898	11602	1626	120	3848	381	319	0	0	0	60	3963	4334	7655	1251
K29	0	0	0	539	300	2778	10052	0	0	300	0	0	0	539	0	0
K30	40	0	0	821	320	6402	16678	60	360	0	0	0	40	821	0	0
K32	12246	6291	0	2640	821	700	22782	9088	2710	10806	0	12246	645	8286	20	0
K34	141	78	0	80	0	0	2498	240	0	0	0	141	78	80	0	0
K35	2333	4443	0	1080	700	200	16976	9178	6295	0	0	2333	2925	2598	0	0
K36	0	0	0	0	0	0	0	160	0	0	0	0	0	0	0	0
K37	0	160	0	0	0	0	445	2132	0	0	0	0	0	160	0	0
K39	459	360	0	1959	0	0	1692	12943	0	860	0	459	80	2239	0	0
K40	0	80	0	20	0	0	180	440	80	0	0	0	60	40	0	0
K41	0	60	0	0	120	0	381	420	0	280	0	0	60	0	0	0
K44	1286	80	126	265	1553	860	25	100	0	0	0	360	560	574	0	60
K45	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0
Ketchkn	81446	90225	96588	94494	87670	89674	87565	68826	47401	64851	59730	73942	70897	81103	90542	102582
S01	839	0	4985	753	2365	1352	3892	0	79	0	839	240	0	3576	0	0
S02	302	0	3707	1541	230	996	3061	0	0	181	302	121	0	2460	195	0
S04	16336	7349	3884	458	9927	6497	0	279	16253	4640	6213	10861	12636	54	0	0
S05	2095	657	797	3498	3602	6112	0	0	139	537	159	2036	657	0	3160	0
S07	1300	340	5060	986	0	5693	5293	0	121	0	438	2435	340	2138	0	0
S08	215	0	2125	0	0	1500	2860	0	0	0	6	522	0	1812	0	0
S09	2174	1819	3790	14906	3634	10225	0	0	2777	0	180	3170	2957	0	15242	0
S10	4088	0	1179	3830	5201	1477	1539	7255	3051	0	782	440	3306	0	0	3491
S11	3307	0	2019	4421	6911	0	4042	5969	7783	0	299	1067	2340	0	0	3641
S12	219	0	1144	4091	239	2952	5586	218	139	0	0	738	0	0	0	3252
S13	0	0	2059	6567	4638	0	7240	15088	0	0	0	2059	0	0	0	6087
S14	0	0	0	379	0	0	0	0	0	0	0	0	0	0	0	0
S16	860	3021	1695	2905	3502	2021	6623	0	0	4205	800	760	3021	0	815	2905
S17	1006	11461	883	1478	1802	1802	3921	0	0	7923	421	1601	2178	2669	1936	5784

Table B-26 (continued)

Acres Harvested By Decade in Alternative D

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S18	380	1322	0	0	300	0	0	578	1283	180	0	2163	0	1322	200	0
S19	5230	14900	120	2535	7242	5397	0	0	0	3003	11876	1039	4194	3899	4448	5888
S20	0	0	723	4007	1068	0	6938	7810	0	0	0	583	0	0	0	464
S21	1107	564	0	0	3444	0	0	0	684	120	0	2981	0	564	987	0
S22	1264	955	183	420	901	0	0	0	1462	276	0	1705	0	882	941	0
S23	10004	10837	2224	3600	5911	8241	4092	460	460	580	3204	1982	6954	2100	1841	8344
S25	4710	5149	6916	760	927	0	5120	7341	612	5062	660	500	0	9975	3810	610
S26	1340	0	6445	0	0	3302	0	7001	0	0	1420	160	0	877	5347	0
S29	320	120	1159	300	860	580	0	540	519	100	2453	0	0	120	220	0
S31	100	140	2640	520	0	2203	0	1717	0	0	240	0	0	2440	0	0
S33	999	520	2302	340	2159	2263	14	3949	740	0	279	0	0	2402	999	0
S35	1001	1420	3367	460	1460	742	5328	0	0	4580	1001	241	520	1906	0	780
Stikine	59196	60574	59406	58755	66323	63355	65549	58205	36102	31387	31572	37404	39103	39196	40141	41246
TOTAL	**172326**	**182154**	**190733**	**191615**	**195774**	**189089**	**199535**	**155330**	**102352**	**116222**	**107466**	**129192**	**129119**	**139366**	**149350**	**161814**

Table B-26 (continued)

Acres Harvested By Decade in Alternative P

Mgt								Decade								
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	0	0	380	2603	1172	2616	480	0	0	0	0	0	0	0	100	380
C06	0	0	0	0	91	20	767	0	0	0	0	0	0	0	0	0
C07	0	0	180	1677	3146	479	439	0	0	0	0	0	0	0	0	180
C10	0	0	0	0	0	100	0	100	0	0	0	0	0	0	0	0
C13	2787	2787	1034	3252	5248	2044	0	0	0	0	40	288	2467	2803	112	0
C14	2668	2625	8774	3399	4895	3020	0	0	2142	396	281	3114	290	2179	3485	3772
C15	0	0	140	342	497	0	0	0	0	0	0	1282	60	0	0	80
C18	0	0	2240	2271	3786	1019	1180	160	0	0	0	0	0	0	180	1640
C19	1094	1007	520	3579	960	500	2136	1360	0	0	0	0	0	0	1613	286
C21	0	0	2661	2159	0	4620	4258	0	0	460	220	540	340	0	1781	0
C27	0	539	168	31	240	140	0	0	540	0	0	219	0	0	351	168
C28	4341	577	1447	341	2624	1461	60	315	1988	0	1031	201	3309	0	618	1367
C29	335	6123	0	1524	480	320	3398	480	0	1779	30	2317	34	4076	438	425
C30	2454	3783	0	463	3480	4660	1680	700	6737	0	2451	264	2	0	3982	0
C31	3053	0	4943	0	1452	1260	5827	2256	2273	287	2131	200	921	0	0	1157
C32	901	950	240	526	872	700	280	0	1400	7	665	47	236	0	903	240
C33	0	0	1678	7	1554	140	0	0	0	0	60	0	0	0	0	1959
C34	2640	54	660	379	0	879	140	139	0	60	1385	54	2354	0	0	280
C37	3384	5973	2209	4151	0	1711	5598	1198	0	8223	4142	3496	3057	2476	0	1070
C39	1551	0	424	955	100	0	0	0	0	0	100	46	757	734	0	26
C40	1091	0	0	0	0	1839	180	20	1192	1229	0	1210	0	0	0	0
C41	1675	2235	2015	540	0	1501	340	0	783	0	1761	1855	1642	2191	2013	0
C43	1801	2228	1096	489	40	882	40	0	0	0	1521	425	878	3088	632	0
C44	0	743	293	452	121	1752	140	0	0	2695	0	529	679	52	0	471
C45	0	0	0	0	0	80	0	0	0	0	0	0	0	0	0	0
C46	0	0	0	0	0	440	0	0	0	134	0	46	0	0	0	0
C48	0	0	241	0	0	783	100	40	271	89	11	492	241	0	0	0
C53	0	0	0	2914	0	0	6515	9600	0	0	0	0	0	0	498	2415
C54	0	0	0	0	0	0	0	5877	0	0	0	0	0	0	0	0
C55	0	0	0	0	160	0	540	402	0	0	0	0	0	0	0	0
C56	0	0	0	0	0	0	20	81	0	0	0	0	0	0	0	0
Chatham	29775	29624	31343	32054	30918	32966	34118	22728	17326	15359	15829	16625	17267	17599	16706	15916

Table B-26 (continued)

Acres Harvested By Decade in Alternative P

Mgt Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
								Decade								
K01	11478	3070	0	3251	4351	3757	200	560	11655	0	0	8571	5977	0	3194	1296
K03	10634	1363	189	44	7077	11886	80	120	0	0	10640	15083	4878	923	189	3876
K04	1820	2039	200	2850	0	220	0	502	3433	0	473	1347	651	1387	1605	1445
K05	3400	8048	0	1305	0	0	0	1084	2869	14099	1938	1462	6147	1901	602	703
K06	0	400	532	3208	3378	1533	0	100	100	0	0	0	400	0	532	6586
K07	7630	9045	13296	4009	3176	1080	0	3548	0	0	30469	9245	7430	7861	5516	6066
K08	6880	3965	10970	11539	3660	4788	230	11492	0	0	1513	4501	4830	3676	8939	8294
K09	5425	3079	13428	2407	960	1680	160	10299	11735	0	0	6202	2303	6461	8568	2107
K10	893	2515	4966	3000	1482	461	0	240	0	0	6136	893	2515	2048	4458	1460
K11	998	7665	3752	2790	0	722	0	281	3347	11144	309	689	4755	6662	1325	1465
K14	1699	3427	176	11370	10824	6347	0	680	0	0	3140	1115	2270	1740	176	21894
K15	2711	2084	0	360	5811	4733	0	580	0	0	0	5680	874	1981	0	4845
K17	3087	609	4916	0	5912	3895	0	0	280	11131	180	1410	2106	2619	2297	0
K18	3998	8444	11160	3344	3322	2932	0	960	841	6504	560	958	10922	1752	12505	616
K19	0	1566	1163	1566	903	180	0	0	0	80	0	0	0	1566	1163	2288
K20	803	1338	0	6119	2901	1374	0	0	0	884	72	320	559	1190	1786	6934
K21	1203	3042	9520	3042	2199	3122	0	1060	0	1776	0	492	2356	2677	11024	0
K22	1329	2634	0	16500	2098	8986	1256	878	0	500	120	200	1009	2634	8398	8947
K24	0	3244	4948	0	60	4246	1282	962	1571	1973	0	0	2423	3484	2285	1682
K25	0	2822	6938	2825	2648	3745	260	0	0	300	0	0	320	5042	4574	6338
K28	0	921	2123	921	1341	742	40	0	0	0	0	0	80	1382	1582	2400
K29	689	0	0	1010	8730	5835	10915	200	0	400	0	0	48	1651	0	8350
K30	1579	0	0	1097	6209	7992	18575	60	840	0	0	0	183	2494	0	5449
K32	7110	8632	0	2700	761	680	17544	13560	1559	10515	639	6470	3805	7527	20	0
K34	0	220	0	100	0	0	2538	240	0	0	0	0	220	100	0	0
K35	2407	2592	0	1020	600	200	16033	8613	5396	0	144	2263	1392	2220	0	0
K39	404	0	0	2494	0	0	11498	6755	0	740	20	220	164	2494	0	0
K41	0	60	0	0	120	0	340	439	0	280	0	0	60	0	0	0
K44	0	100	280	520	1779	940	0	60	0	0	40	100	0	320	100	0
Ketchkn	76177	82924	88557	89391	80302	82076	80951	63273	43626	60326	56393	67221	68677	73792	80838	103041

Table B-26 (continued)

Acres Harvested By Decade in Alternative P

Mgt Area	1	2	3	4	5	6	7	Decade 8	9	10	11	12	13	14	15	16
S01	578	868	4360	1252	1845	4098	5038	0	140	0	1020	0	426	3151	479	0
S02	0	0	1767	1859	1219	1249	2800	0	0	121	0	342	0	542	1859	53
S04	16334	7268	2069	611	5060	4860	0	239	18100	1836	6546	7050	10781	399	153	3311
S09	2862	3070	1801	11041	2506	8671	0	0	1959	0	474	3974	2197	0	10361	628
S10	1616	2051	1022	3651	4958	1795	7134	5372	716	0	681	522	2904	582	0	3312
S11	1845	1163	655	4324	6937	2781	1060	6113	7729	0	259	1946	1163	295	0	3504
S12	0	0	20	69	70	0	19	0	0	0	0	20	0	0	60	60
S13	947	0	2021	7303	4338	0	7483	12990	0	0	0	2968	0	0	0	6843
S14	0	0	0	738	0	0	0	0	0	0	0	0	0	0	0	0
S16	4116	0	4041	0	2884	1661	6663	0	0	3320	1300	60	2540	3841	276	0
S17	255	10970	1070	1194	1762	1542	3724	0	0	7384	420	1781	3410	1097	1194	5466
S18	188	191	140	0	433	60	0	461	6	0	0	1407	0	280	100	0
S19	2445	14116	120	4179	7753	4357	0	0	0	4658	8035	1506	5152	0	4155	7577
S20	573	0	603	3401	645	0	6535	4609	0	0	0	1136	0	0	0	0
S21	0	0	20	121	584	0	0	0	20	0	0	2517	0	0	121	0
S22	623	878	440	420	801	801	0	0	561	0	0	1561	0	721	374	286
S23	7367	2920	9156	3868	6791	6939	3695	220	0	280	2715	2131	592	6990	6481	978
S25	2812	6165	6081	2989	1560	0	5222	7682	0	4142	600	660	0	8232	3201	2165
S26	1564	496	7099	0	0	7419	0	5798	0	0	1244	756	380	3968	2791	0
S29	0	0	2339	839	2038	700	0	659	0	0	2473	159	0	140	239	0
S31	1671	244	986	620	0	2441	0	1400	0	0	80	100	1671	470	0	0
S33	1896	500	884	340	2179	1918	0	3387	0	0	140	0	1116	500	1244	0
S35	2013	187	3246	500	580	1862	5804	0	0	4237	961	120	380	1805	740	0
Stikine	49705	51087	49940	49319	54943	53154	55177	48930	29231	25978	26948	30716	32712	33013	33828	34183
TOTAL	155657	163635	169840	170764	166163	168196	170246	134931	90183	101663	99170	114562	118656	124404	131372	153140

Miles of New Road Construction

Roads are constructed primarily to access timber. From four to 15 miles of new roads are needed to access every 1000 acres of timber land on the forest. The road density depends on the location of the timber harvesting activity. Table B-27 shows the amount of roading FORPLAN scheduled in order to access timber. The values in the table are miles of roads constructed per decade. This information is presented by alternative for each Management Area and decade.

Table B-27
Miles of New Road Construction in Alternative A

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C05	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
C06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C07	8	7	0	6	1	13	0	0	0	0	0	0	0	0	0	0
C10	4	5	1	0	0	0	3	0	0	0	0	0	0	0	0	0
C12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C13	15	17	19	0	5	0	20	0	0	0	0	0	0	0	0	0
C14	12	26	1	0	0	4	9	0	0	0	0	0	0	0	0	0
C15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C18	12	14	5	4	20	4	0	0	0	0	0	0	0	0	0	0
C19	10	11	3	4	14	6	0	0	0	0	0	0	0	0	0	0
C21	12	10	1	0	0	10	7	0	0	0	0	0	0	0	0	0
C25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C29	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C30	21	12	0	6	5	13	0	1	0	0	0	0	0	0	0	0
C31	18	19	13	4	8	3	9	1	0	0	0	0	0	0	0	0
C32	3	2	0	0	3	0	1	0	0	0	0	0	0	0	0	0
C34	14	20	0	1	1	9	22	0	0	0	0	0	0	0	0	0
C37	42	44	0	11	0	17	26	2	1	0	0	0	0	0	0	0
C40	5	4	10	0	2	0	0	0	0	0	0	0	0	0	0	0
C41	10	8	17	0	2	2	0	0	0	0	0	0	0	0	0	0
C43	15	12	7	1	0	0	1	0	1	0	0	0	0	0	0	0
C44	3	2	0	1	0	0	4	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
C53	1	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
C54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham	209	219	77	39	62	82	102	4	2	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative A

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K01	24	20	7	0	7	7	0	0	0	0	0	0	0	0	0	0
K03	24	37	6	18	4	27	3	0	0	0	0	0	0	0	0	0
K04	4	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0
K05	26	15	0	5	0	0	0	4	0	0	0	0	0	0	0	0
K06	3	2	4	0	2	0	0	0	0	0	0	0	0	0	0	0
K07	30	32	28	0	3	2	0	1	0	0	0	0	0	0	0	0
K08	25	39	32	5	13	10	0	0	0	0	0	0	0	0	0	0
K09	26	37	28	16	7	7	0	1	0	0	0	0	0	0	0	0
K10	10	15	11	4	3	1	0	0	0	0	0	0	0	0	0	0
K11	26	12	1	9	0	0	0	0	1	0	0	0	0	0	0	0
K14	48	51	0	67	21	16	2	2	0	0	0	0	0	0	0	0
K15	14	16	0	17	2	17	1	2	0	0	0	0	0	0	0	0
K17	29	12	6	0	6	6	0	0	0	0	0	0	0	0	0	0
K18	24	25	17	11	0	17	1	0	1	0	0	0	0	0	0	0
K19	5	10	0	8	3	0	0	0	0	0	0	0	0	0	0	0
K20	17	16	0	23	20	4	0	0	0	0	0	0	0	0	0	0
K21	12	10	16	5	7	1	0	0	0	0	0	0	0	0	0	0
K22	36	35	0	27	31	36	4	4	0	0	0	0	0	0	0	0
K24	25	23	0	8	12	19	5	4	2	0	0	0	0	0	0	0
K25	17	24	0	23	15	4	0	0	0	0	0	0	0	0	0	0
K28	11	15	0	11	11	3	0	1	0	0	0	0	0	0	0	0
K29	25	25	0	3	24	21	28	0	0	0	0	0	0	0	0	0
K30	40	37	0	2	27	28	50	0	0	0	0	0	0	0	0	0
K32	57	59	4	6	0	21	80	14	0	0	0	0	0	0	0	0
K34	5	4	0	0	0	0	10	1	0	0	0	0	0	0	0	0
K35	61	66	1	7	0	1	164	1	0	0	0	0	0	0	0	0
K39	20	20	0	3	6	5	26	17	0	0	0	0	0	0	0	0
K41	3	3	0	0	0	2	6	0	0	0	0	0	0	0	0	0
Ketchkn	647	663	163	278	224	255	380	52	4	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative A

Mgt Area	DECADE 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S01	23	19	20	3	8	5	16	0	0	0	0	0	0	0	0	0
S02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S04	61	56	5	8	10	28	3	2	2	1	1	2	1	0	0	0
S09	50	56	8	18	6	29	0	0	0	0	0	0	0	0	0	0
S10	33	30	4	25	9	11	36	0	0	0	0	0	0	0	0	0
S11	39	27	8	18	13	4	23	0	0	0	0	0	0	0	0	0
S12	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
S13	20	13	3	7	10	11	0	0	0	0	0	0	0	0	0	0
S16	8	6	2	4	1	4	4	0	0	0	0	0	0	0	0	0
S17	17	23	5	4	5	1	12	1	0	0	0	0	0	0	0	0
S18	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S19	24	30	0	6	13	10	0	16	0	0	0	0	0	0	0	0
S20	43	25	9	18	1	24	5	0	0	0	0	0	0	0	0	0
S21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S23	57	48	26	11	10	8	12	0	0	0	0	0	0	0	0	0
S25	45	34	31	4	1	13	36	1	0	0	0	0	0	0	0	0
S26	37	40	15	0	0	9	8	0	0	0	0	0	0	0	0	0
S31	11	12	7	2	0	3	4	0	0	0	0	0	0	0	0	0
S33	19	23	7	1	1	6	2	0	1	0	0	0	0	0	0	0
S35	10	8	8	1	1	1	8	1	0	0	0	0	0	0	0	0
Stikine	498	451	158	131	89	167	169	21	3	1	1	2	1	0	0	0
TOTAL	**1354**	**1333**	**398**	**448**	**375**	**504**	**651**	**77**	**9**	**1**	**1**	**2**	**1**	**0**	**0**	**0**

Table B-27 (continued)
Miles of New Road Construction in Alternative B

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	4	6	0	3	4	0	0	0	0	0	0	0	0	0	0	0
C06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C07	8	8	2	4	1	10	4	0	0	0	0	0	0	0	0	0
C10	4	8	2	0	0	0	0	9	0	0	0	0	0	0	0	0
C12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C13	34	37	25	5	32	4	34	0	0	0	0	0	0	0	0	0
C14	13	17	8	0	0	9	5	0	0	0	0	0	0	0	0	0
C15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C18	12	14	9	1	5	19	0	0	0	0	0	0	0	0	0	0
C19	10	11	3	3	0	18	1	0	0	0	0	0	0	0	0	0
C21	12	10	1	0	0	7	10	0	0	0	0	0	0	0	0	0
C27	2	4	0	1	0	0	2	0	0	0	0	0	0	0	0	0
C28	18	35	1	10	9	0	7	2	4	0	0	0	0	0	0	0
C29	12	11	1	3	0	2	5	1	0	0	0	0	0	0	0	0
C30	18	22	0	1	11	17	0	1	0	0	0	0	0	0	0	0
C31	18	20	7	5	12	3	9	1	0	0	0	0	0	0	0	0
C32	3	4	0	2	2	0	1	0	0	0	0	0	0	0	0	0
C34	14	21	1	1	1	0	27	0	0	1	0	0	0	0	0	0
C37	47	36	4	11	0	16	22	1	0	0	0	0	0	0	0	0
C39	6	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0
C40	6	4	10	1	0	0	0	0	0	0	0	0	0	0	0	0
C41	10	8	18	2	0	2	0	0	0	0	0	0	0	0	0	0
C43	24	8	5	1	0	0	1	0	0	0	0	0	0	0	0	0
C44	3	3	1	1	0	0	5	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	2	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0
C53	2	3	0	0	0	0	0	5	0	0	0	0	0	0	0	0
C54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham	282	293	101	55	78	109	133	20	4	1	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative B

Mgt								Decade								
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K01	29	24	11	0	10	12	0	1	0	0	0	0	0	0	0	0
K03	27	36	6	34	1	24	4	0	0	0	0	0	0	0	0	0
K04	8	6	1	9	0	1	0	1	0	0	0	0	0	0	0	0
K05	26	10	0	9	1	0	0	4	0	0	0	0	0	0	0	0
K07	45	53	33	0	5	3	0	0	0	0	0	0	0	0	0	0
K08	37	55	45	7	20	14	0	1	0	0	0	0	0	0	0	0
K09	26	42	36	2	7	7	0	1	0	0	0	0	0	0	0	0
K10	10	15	11	4	3	1	0	0	0	0	0	0	0	0	0	0
K11	25	10	2	11	0	0	0	0	1	0	0	0	0	0	0	0
K14	42	45	3	65	36	16	1	2	0	0	0	0	0	0	0	0
K15	20	22	0	34	3	13	2	2	0	0	0	0	0	0	0	0
K17	28	13	6	2	1	13	0	0	0	0	0	0	0	0	0	0
K18	23	25	16	11	0	16	1	0	1	0	0	0	0	0	0	0
K19	5	10	0	8	2	0	0	0	0	0	0	0	0	0	0	0
K20	20	19	0	27	21	7	0	0	0	0	0	0	0	0	0	0
K21	24	26	23	15	6	12	2	1	0	0	0	0	0	0	0	0
K22	4	4	0	2	2	4	1	1	0	0	0	0	0	0	0	0
K24	24	27	0	11	12	19	5	4	2	0	0	0	0	0	0	0
K25	23	32	0	29	19	9	0	4	0	0	0	0	0	0	0	0
K28	9	13	0	12	8	3	0	0	0	0	0	0	0	0	0	0
K29	25	25	0	3	22	23	28	0	0	0	0	0	0	0	0	0
K30	41	38	0	4	39	29	38	0	0	0	0	0	0	0	0	0
K32	90	75	7	0	16	25	115	40	0	0	0	0	0	0	0	0
K34	2	2	0	0	1	0	5	0	0	0	0	0	0	0	0	0
K35	59	65	1	0	7	1	159	1	0	0	0	0	0	0	0	0
K39	39	39	0	0	14	7	57	37	0	0	0	0	0	0	0	0
K41	1	1	0	0	0	1	3	0	0	0	0	0	0	0	0	0
Ketchkn	712	732	201	299	256	260	421	100	4	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative B

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S01	23	19	18	3	8	6	16	0	0	0	0	0	0	0	0	0
S02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S04	61	49	9	2	17	21	0	0	2	0	1	1	0	0	0	0
S07	18	18	16	2	0	16	17	1	0	0	0	0	0	0	0	0
S08	8	8	6	0	0	6	11	0	0	0	0	0	0	0	0	0
S09	32	36	8	48	7	30	0	0	0	0	0	0	0	0	0	0
S10	35	31	9	17	7	9	5	38	0	0	0	0	0	0	0	0
S11	36	29	8	21	11	9	10	19	0	0	0	0	0	0	0	0
S12	2	2	0	1	0	1	2	0	0	0	0	0	0	0	0	0
S13	49	49	13	22	7	0	81	24	0	0	0	0	0	0	0	0
S16	27	27	17	0	5	6	30	0	0	0	0	0	0	0	0	0
S17	19	29	7	0	6	2	13	0	0	0	0	0	0	0	0	0
S18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S19	24	42	0	9	13	12	0	0	0	0	0	0	0	0	0	0
S20	26	26	3	20	1	0	35	18	0	0	0	0	0	0	0	0
S21	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S23	88	40	10	15	15	18	0	0	0	0	0	0	0	0	0	0
S25	49	42	21	14	1	15	10	32	0	0	0	0	0	0	0	0
S26	40	30	28	0	0	21	0	7	0	0	0	0	0	0	0	0
S31	9	12	4	2	0	7	0	0	0	0	0	0	0	0	0	0
S33	14	14	9	1	1	7	0	19	0	0	0	0	0	0	0	0
S35	21	20	14	1	6	2	25	0	0	0	0	0	0	0	0	0
Stikine	582	523	200	178	105	188	255	158	2	0	1	1	0	0	0	0
TOTAL	1576	1548	502	532	439	557	809	278	10	1	1	1	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative C

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	11	10	1	8	10	9	1	0	0	0	0	0	0	0	0	0
C06	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0
C07	8	8	3	4	4	13	0	0	0	0	0	0	0	0	0	0
C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C13	25	24	26	0	33	10	0	0	0	0	0	0	0	0	0	0
C14	50	44	41	10	26	16	0	0	0	0	0	0	0	0	0	0
C15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C18	12	12	0	9	17	8	1	0	0	0	0	0	0	0	0	0
C19	10	10	0	8	12	5	2	2	0	0	0	0	0	0	0	0
C21	28	30	13	10	23	16	17	0	0	0	0	0	0	0	0	0
C25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C27	2	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0
C28	18	40	6	11	0	13	2	0	0	0	0	0	0	0	0	0
C29	19	14	2	0	0	3	1	0	0	0	0	0	0	0	0	0
C30	19	36	2	21	0	12	7	0	0	0	0	0	0	0	0	0
C31	30	33	15	32	0	6	12	1	0	0	0	0	0	0	0	0
C32	10	4	1	3	0	2	1	0	0	0	0	0	0	0	0	0
C34	6	13	0	4	1	0	0	0	0	0	0	0	0	0	0	0
C37	54	26	6	0	15	3	11	0	0	0	0	0	0	0	0	0
C39	7	9	1	4	0	0	0	0	0	0	0	0	0	0	0	0
C40	4	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0
C41	32	9	0	2	0	0	2	0	0	0	0	0	0	0	0	0
C43	39	16	2	13	0	0	1	0	0	0	0	0	0	0	0	0
C44	6	8	9	1	0	0	0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0
C53	3	3	0	0	0	0	9	5	0	0	0	0	0	0	0	0
C54	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
C55	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
C56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham	395	366	138	143	141	117	68	9	0	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative C

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K01	40	34	1	18	11	13	0	1	0	0	0	0	0	0	0	0
K03	36	50	5	17	7	49	4	0	0	0	0	0	0	0	0	0
K04	12	14	0	13	0	1	0	2	0	0	0	0	0	0	0	0
K05	28	16	0	5	0	0	0	4	0	0	0	0	0	0	0	0
K06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
K07	60	42	20	14	5	2	0	1	0	0	0	0	0	0	0	0
K08	71	66	59	24	11	17	0	2	0	0	0	0	0	0	0	0
K09	28	46	24	24	2	8	0	1	0	0	0	0	0	0	0	0
K10	13	17	7	10	4	1	0	0	0	0	0	0	0	0	0	0
K11	29	17	0	12	0	3	0	0	2	0	0	0	0	0	0	0
K13	3	3	0	5	2	0	3	0	0	0	0	0	0	0	0	0
K14	53	68	0	25	52	57	3	3	0	0	0	0	0	0	0	0
K15	24	33	2	0	21	24	2	2	0	0	0	0	0	0	0	0
K17	22	23	19	0	15	13	0	0	0	0	0	0	0	0	0	0
K18	49	77	42	17	13	10	0	3	1	0	0	0	0	0	0	0
K19	12	16	15	3	6	1	7	0	0	0	0	0	0	0	0	0
K20	29	37	0	48	16	14	0	0	0	0	0	0	0	0	0	0
K21	45	69	45	26	13	13	0	4	0	0	0	0	0	0	0	0
K22	70	85	0	105	3	58	8	5	0	0	0	0	0	0	0	0
K24	28	28	25	0	0	20	6	4	2	0	0	0	0	0	0	0
K25	32	47	35	14	13	19	1	0	0	0	0	0	0	0	0	0
K28	29	40	31	11	10	17	1	0	0	0	0	0	0	0	0	0
K29	60	60	0	6	66	31	76	1	0	0	0	0	0	0	0	0
K30	74	72	0	6	67	19	120	0	0	0	0	0	0	0	0	0
K32	120	110	0	19	1	4	158	93	0	0	0	0	0	0	0	0
K34	10	10	0	1	0	0	22	7	0	0	0	0	0	0	0	0
K35	73	69	0	7	0	1	120	64	0	0	0	0	0	0	0	0
K39	53	52	0	18	0	0	42	94	0	0	0	0	0	0	0	0
K41	3	3	0	0	0	0	7	4	0	0	0	0	0	0	0	0
K44	14	8	1	0	10	6	0	0	0	0	0	0	0	0	0	0
Ketchkn	1120	1212	331	448	348	401	580	295	5	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative C

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S01	31	27	9	18	13	12	22	0	0	0	0	0	0	0	0	0
S04	88	62	14	4	18	35	0	0	2	0	1	2	0	0	0	0
S07	22	22	17	4	0	22	21	0	0	0	0	0	0	0	0	0
S08	8	8	6	0	0	6	11	0	0	0	0	0	0	0	0	0
S09	42	38	8	57	8	36	0	0	0	0	0	0	0	0	0	0
S10	38	34	2	21	7	10	36	14	1	0	0	0	0	0	0	0
S11	35	31	1	23	11	2	17	30	0	0	0	0	0	0	0	0
S12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S13	56	56	12	36	7	0	46	67	0	0	0	0	0	0	0	0
S16	32	30	20	0	5	9	34	0	0	0	0	0	0	0	0	0
S17	22	34	6	2	2	7	17	0	0	0	0	0	0	0	0	0
S18	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S19	28	43	0	6	19	7	0	0	0	0	0	0	0	0	0	0
S20	28	28	3	18	1	0	16	47	0	0	0	0	0	0	0	0
S21	2	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
S22	6	5	1	1	2	2	0	0	0	0	0	0	0	0	0	0
S23	95	79	16	14	25	21	12	0	0	0	0	0	0	0	0	0
S25	50	54	35	10	2	0	27	38	0	0	0	0	0	0	0	0
S26	50	39	37	3	0	37	0	31	0	0	0	0	0	0	0	0
S29	9	8	11	3	1	4	0	1	1	0	0	0	0	0	0	0
S31	12	11	12	2	0	11	0	6	0	0	0	0	0	0	0	0
S33	15	14	9	1	2	7	1	16	1	0	0	0	0	0	0	0
S35	22	22	16	1	3	8	26	0	0	0	0	0	0	0	0	0
Stikine	692	649	235	224	128	236	286	250	5	0	1	2	0	0	0	0
TOTAL	**2207**	**2227**	**704**	**815**	**617**	**754**	**934**	**554**	**10**	**0**	**1**	**2**	**0**	**0**	**0**	**0**

Table B-27 (continued)
Miles of New Road Construction in Alternative D

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	4	6	0	4	4	0	0	0	0	0	0	0	0	0	0	0
C05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C06	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0
C07	8	8	3	3	15	0	3	0	0	0	0	0	0	0	0	0
C10	8	17	2	0	0	0	0	14	0	0	0	0	0	0	0	0
C12	4	8	0	0	0	10	0	0	0	0	0	0	0	0	0	0
C13	46	49	25	6	5	56	42	0	0	0	0	0	0	0	0	0
C14	11	17	10	1	5	4	5	0	0	0	0	0	0	0	0	0
C17	5	4	0	6	1	0	0	2	0	0	0	0	0	0	0	0
C18	12	11	4	5	16	0	0	4	0	0	0	0	0	0	0	0
C19	11	10	2	6	15	0	0	4	0	0	0	0	0	0	0	0
C21	23	33	5	4	5	10	9	6	0	0	0	0	0	0	0	0
C25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C27	4	2	0	0	2	0	2	0	0	0	0	0	0	0	0	0
C28	29	41	3	8	0	10	5	0	3	0	0	0	0	0	0	0
C29	39	28	4	2	7	5	11	1	0	0	0	0	0	0	0	0
C30	44	26	0	16	11	3	24	0	1	2	0	0	0	0	0	0
C31	23	26	14	19	7	5	16	0	0	0	0	0	0	0	0	0
C32	7	4	0	2	1	2	2	0	0	0	0	0	0	0	0	0
C33	2	2	0	2	0	1	2	0	0	0	0	0	0	0	0	0
C34	22	32	1	0	5	13	35	0	0	0	0	0	0	0	0	0
C37	33	45	13	8	7	17	23	0	1	0	0	0	0	0	0	0
C39	5	5	2	0	0	2	0	0	0	0	0	0	0	0	0	0
C40	5	3	1	1	0	0	0	3	0	0	0	0	0	0	0	0
C41	10	13	20	0	0	2	0	2	0	0	0	0	0	0	0	0
C43	19	18	27	3	1	1	0	2	0	0	0	0	0	0	0	0
C44	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative D

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C53	5	3	0	0	0	0	0	6	2	3	0	0	0	0	0	0
C54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham	382	414	139	98	108	141	179	46	7	5	0	0	0	0	0	0
K01	31	35	2	7	26	13	0	2	0	0	0	0	0	0	0	0
K03	39	58	7	0	44	41	2	0	0	0	0	0	0	0	0	0
K04	17	19	0	7	10	1	0	2	0	0	0	0	0	0	0	0
K05	30	18	0	4	4	0	0	4	1	0	0	0	0	0	0	0
K06	13	12	0	16	12	5	0	0	0	0	0	0	0	0	0	0
K07	56	50	11	32	8	2	0	1	0	0	0	0	0	0	0	0
K08	47	60	27	54	10	16	0	2	0	0	0	0	0	0	0	0
K09	30	39	14	20	24	8	0	1	0	0	0	0	0	0	0	0
K10	12	20	8	12	5	2	0	0	0	0	0	0	0	0	0	0
K11	32	26	0	7	8	3	0	0	2	0	0	0	0	0	0	0
K13	5	5	0	7	0	0	9	0	0	0	0	0	0	0	0	0
K14	49	47	0	11	50	63	0	3	0	0	0	0	0	0	0	0
K15	17	18	2	7	23	14	0	2	0	0	0	0	0	0	0	0
K17	27	18	14	0	12	7	0	0	0	0	0	0	0	0	0	0
K18	41	60	47	4	12	9	0	2	1	0	0	0	0	0	0	0
K19	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
K20	30	37	0	48	0	14	14	0	0	0	0	0	0	0	0	0
K21	46	78	38	34	12	9	0	2	0	0	0	0	0	0	0	0
K22	79	84	0	62	4	61	46	5	0	0	0	0	0	0	0	0
K24	35	33	28	0	0	23	6	5	2	0	0	0	0	0	0	0
K25	43	55	44	16	16	21	1	0	0	0	0	0	0	0	0	0
K26	21	14	9	11	7	8	0	0	0	0	0	0	0	0	0	0
K28	46	52	59	8	0	19	1	0	0	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative D

Mgt	Decade															
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K29	27	27	0	3	1	16	60	0	0	0	0	0	0	0	0	0
K30	48	48	0	4	1	38	100	0	0	0	0	0	0	0	0	0
K32	118	107	0	19	1	4	170	67	0	0	0	0	0	0	0	0
K34	7	7	0	0	0	0	18	1	0	0	0	0	0	0	0	0
K35	76	79	0	8	1	1	127	68	0	0	0	0	0	0	0	0
K36	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
K37	6	6	0	0	0	0	3	15	0	0	0	0	0	0	0	0
K39	42	42	0	14	0	0	12	97	0	0	0	0	0	0	0	0
K40	1	1	0	0	0	0	1	3	0	0	0	0	0	0	0	0
K41	2	2	0	0	0	0	2	3	0	0	0	0	0	0	0	0
K44	11	5	0	1	6	3	0	0	0	0	0	0	0	0	0	0
K45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ketchkn	1084	1163	310	417	297	401	572	286	6	0	0	0	0	0	0	0
S01	24	21	22	3	9	6	17	0	0	0	0	0	0	0	0	0
S02	21	14	16	6	1	4	13	0	0	0	0	0	0	0	0	0
S04	80	51	11	1	19	27	0	0	1	1	0	2	0	0	0	0
S05	30	22	3	14	10	25	0	0	0	0	0	0	0	0	0	0
S07	34	29	22	4	0	25	23	0	0	0	0	0	0	0	0	0
S08	11	10	9	0	0	6	12	0	0	0	0	0	0	0	0	0
S09	52	49	15	62	9	42	0	0	0	0	0	0	0	0	0	0
S10	37	31	6	19	8	7	7	36	0	0	0	0	0	0	0	0
S11	38	33	10	22	11	0	20	30	0	0	0	0	0	0	0	0
S12	24	23	5	20	0	15	28	0	0	0	0	0	0	0	0	0
S13	54	53	12	27	7	0	43	71	0	0	0	0	0	0	0	0
S16	27	30	8	13	5	9	31	0	0	0	0	0	0	0	0	0
S17	21	38	3	6	2	8	17	0	0	0	0	0	0	0	0	0
S18	3	5	0	0	0	0	0	0	2	0	0	0	0	0	0	0
S19	31	46	0	6	15	12	0	0	0	0	0	0	0	0	0	0
S20	31	30	3	21	1	0	41	23	0	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative D

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S21	7	6	0	0	9	0	0	0	1	0	0	0	0	0	0	0
S22	7	6	0	1	2	0	0	0	3	0	0	0	0	0	0	0
S23	96	99	9	15	22	34	17	0	0	0	0	0	0	0	0	0
S25	51	49	35	3	1	0	26	36	0	0	0	0	0	0	0	0
S26	35	28	30	0	0	15	0	33	0	0	0	0	0	0	0	0
S29	5	4	5	1	1	2	0	0	0	0	0	0	0	0	0	0
S31	12	11	12	2	0	10	0	7	0	0	0	0	0	0	0	0
S33	18	17	11	1	3	10	0	18	1	0	0	0	0	0	0	0
S35	20	20	15	1	5	3	23	0	0	0	0	0	0	0	0	0
Stikine	769	725	262	248	140	260	318	254	8	1	0	2	0	0	0	0
TOTAL	**2235**	**2302**	**711**	**763**	**545**	**802**	**1069**	**586**	**21**	**6**	**0**	**2**	**0**	**0**	**0**	**0**

Table B-27 (continued)
Miles of New Road Construction in Alternative P

Mgt Area	Decade 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C03	8	8	1	9	4	9	1	0	0	0	0	0	0	0	0	0
C06	1	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0
C07	7	7	0	6	11	1	1	0	0	0	0	0	0	0	0	0
C10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C13	35	35	4	13	22	8	0	0	0	0	0	0	0	0	0	0
C14	50	50	36	14	20	12	0	0	8	1	0	0	0	0	0	0
C15	2	2	0	2	3	0	0	0	0	0	0	0	0	0	0	0
C18	14	14	10	10	17	4	1	0	0	0	0	0	0	0	0	0
C19	13	13	2	16	4	2	3	0	0	0	0	0	0	0	0	0
C21	16	16	9	7	0	16	15	0	0	1	0	0	0	0	0	0
C27	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C28	30	15	5	1	10	5	0	0	0	0	0	0	0	0	0	0
C29	13	33	0	6	2	1	5	0	0	0	0	0	0	0	0	0
C30	19	29	0	1	13	8	2	0	0	0	0	0	0	0	0	0
C31	22	15	18	0	5	4	9	0	0	0	0	0	0	0	0	0
C32	6	8	0	2	3	1	0	0	0	0	0	0	0	0	0	0
C33	4	4	7	0	6	0	0	0	0	0	0	0	0	0	0	0
C34	16	5	2	1	0	1	0	0	0	0	0	0	0	0	0	0
C37	37	39	9	17	0	5	8	0	0	0	0	0	0	0	0	0
C39	12	4	2	4	0	0	0	0	0	0	0	0	0	0	0	0
C40	3	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
C41	17	15	9	2	0	2	0	0	0	0	0	0	0	0	0	0
C43	16	17	5	2	0	1	0	0	0	0	0	0	0	0	0	0
C44	3	4	2	2	0	2	0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C48	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
C53	2	2	0	0	0	0	7	3	0	0	0	0	0	0	0	0
C54	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
C55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chatham	347	339	121	115	120	85	54	4	8	2	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative P

Mgt								Decade								
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
K01	46	31	0	11	11	12	0	2	0	0	0	0	0	0	0	0
K03	49	37	0	0	22	52	0	0	0	0	0	0	0	0	0	0
K04	11	14	0	12	0	0	0	2	0	0	0	0	0	0	0	0
K05	16	27	0	5	0	0	0	4	1	0	0	0	0	0	0	0
K06	10	12	1	11	12	5	0	0	0	0	0	0	0	0	0	0
K07	42	47	32	14	5	3	0	1	0	0	0	0	0	0	0	0
K08	53	51	32	41	10	15	0	0	0	0	0	0	0	0	0	0
K09	34	34	38	8	2	5	0	1	0	0	0	0	0	0	0	0
K10	12	17	7	10	4	1	0	0	0	0	0	0	0	0	0	0
K11	14	27	6	12	0	3	0	0	1	0	0	0	0	0	0	0
K14	52	61	0	51	48	27	0	3	0	0	0	0	0	0	0	0
K15	26	29	0	1	22	20	0	2	0	0	0	0	0	0	0	0
K17	26	20	17	0	15	13	0	0	0	0	0	0	0	0	0	0
K18	54	75	43	13	12	11	0	3	1	0	0	0	0	0	0	0
K19	9	17	5	7	4	0	0	0	0	0	0	0	0	0	0	0
K20	23	29	0	34	16	7	0	0	0	0	0	0	0	0	0	0
K21	30	38	34	10	7	11	0	3	0	0	0	0	0	0	0	0
K22	67	76	0	94	9	50	5	5	0	0	0	0	0	0	0	0
K24	23	32	25	0	0	21	6	4	2	0	0	0	0	0	0	0
K25	32	47	35	14	13	19	1	0	0	0	0	0	0	0	0	0
K28	10	14	10	4	6	3	0	0	0	0	0	0	0	0	0	0
K29	59	54	0	6	52	35	65	1	0	0	0	0	0	0	0	0
K30	81	70	0	6	37	47	111	0	0	0	0	0	0	0	0	0
K32	105	108	0	20	1	4	131	100	0	0	0	0	0	0	0	0
K34	7	7	0	0	0	0	19	1	0	0	0	0	0	0	0	0
K35	71	71	0	7	0	1	120	64	0	0	0	0	0	0	0	0
K39	52	52	0	18	0	0	86	50	0	0	0	0	0	0	0	0
K41	2	2	0	0	0	0	2	3	0	0	0	0	0	0	0	0
K44	4	5	0	2	7	4	0	0	0	0	0	0	0	0	0	0
Ketchkn	1020	1104	285	411	315	369	546	249	5	0	0	0	0	0	0	0

Table B-27 (continued)
Miles of New Road Construction in Alternative P

Mgt								Decade								
Area	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S01	29	30	19	5	7	18	22	0	0	0	0	0	0	0	0	0
S02	13	13	7	8	5	5	12	0	0	0	0	0	0	0	0	0
S04	69	44	7	2	11	20	0	0	3	0	1	2	0	0	0	0
S09	50	43	7	46	7	36	0	0	0	0	0	0	0	0	0	0
S10	36	36	5	18	7	9	36	15	1	0	0	0	0	0	0	0
S11	33	32	3	22	11	14	5	31	0	0	0	0	0	0	0	0
S12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S13	56	54	12	36	6	0	44	60	0	0	0	0	0	0	0	0
S16	34	24	19	0	4	7	31	0	0	0	0	0	0	0	0	0
S17	19	36	4	4	2	6	16	0	0	0	0	0	0	0	0	0
S18	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S19	25	43	0	8	16	10	0	0	0	0	0	0	0	0	0	0
S20	30	28	3	20	1	0	39	19	0	0	0	0	0	0	0	0
S21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S22	5	5	1	1	2	2	0	0	0	0	0	0	0	0	0	0
S23	80	60	38	16	25	29	15	0	0	0	0	0	0	0	0	0
S25	52	53	30	15	2	0	26	38	0	0	0	0	0	0	0	0
S26	43	38	34	0	0	35	0	27	0	0	0	0	0	0	0	0
S29	7	7	10	3	3	3	0	1	0	0	0	0	0	0	0	0
S31	20	12	4	2	0	11	0	6	0	0	0	0	0	0	0	0
S33	20	14	4	1	3	9	0	16	0	0	0	0	0	0	0	0
S35	23	18	14	1	0	8	26	0	0	0	0	0	0	0	0	0
Stikine	645	591	221	208	112	222	272	213	4	0	1	2	0	0	0	0
TOTAL	2012	2034	627	734	547	676	872	466	17	2	1	2	0	0	0	0

Forest Budget Levels

Estimated forest budget for the alternatives are presented in Table B-28. The budget figures listed for Alternative C are the funding levels at the 450 MMBF per year ASQ level and may not represent current funding amount. All funding estimates are budget requirements needed to fully implement all aspects of the alternative.

The revenues and expenditures are calculated with the All Resource Reporting (ARR) accounting structure. Revenues are the actual receipts collected by the Forest Service. Expenditures (costs) are divided into three categories:

1) Operations - The costs of meeting ongoing management activities based upon past commitments, established special uses, ongoing activities, imposed legal requirements, and managing public use.

2) Maintenance - The cost necessary to protect, maintain, or restore a previous investment.

3) Investment Opportunities - Discretionary capital investments necessary to produce the measurable outputs or end results authorized by the Forest Plan.

The Expenditure row of Table B-28 is the total of these three cost items.

Note that economic analysis elsewhere in this appendix and in Chapters 2 and 3 is net-willingness-to-pay analysis. This Forest budget analysis is based on actual government receipts and anticipated expenditures.

Table B-28
Tongass Forest Budget By Alternative (Average Annual For The First Decade)
Alternative A (Thousands of 1990 Dollars)

	Timber	Recreation	Minerals	Range	Watershed	Wildlife and Fish	Protection	Total
Revenues	29,000	1,500	0	0	0	0	0	$30,500
Expenditures	29,800	14,200	1,500	0	3,000	15,000	35,000	98,500
Operations	12,300	5,000	1,500	0	2,125	8,550	17,000	46,475
Maintenance	500	3,000	0	0	75	1,350	3,000	7,925
Investment Opportunities	17,000	6,200	0	0	800	5,100	15,000	44,100

Alternative B
(Thousands of 1990 Dollars)

	Timber	Recreation	Minerals	Range	Watershed	Wildlife and Fish	Protection	Total
Revenues	33,500	1,500	0	0	0	0	0	$35,000
Expenditures	32,900	14,200	1,500	0	3,000	15,000	35,000	101,600
Operations	13,400	5,000	1,500	0	2,125	8,550	17,000	47,575
Maintenance	500	3,000	0	0	75	1,350	3,000	7,925
Investment Opportunities	19,000	6,200	0	0	800	5,100	15,000	46,100

Table B-28 (continued)
Tongass Forest Budget by Alternative (Average Annual For The First Decade)
Alternative C
(Thousands of 1990 Dollars)

	Timber	Recreation	Minerals	Range	Watershed	Wildlife and Fish	Protection	Total
Revenues	42,995	1,000	0	0	0	0	0	$43,995
Expenditures	41,473	11,925	1,256	0	2,942	9,897	30,212	97,705
Operations	16,391	6,354	1,256	0	2,125	5,535	13,406	45,067
Maintenance	500	2,766	0	0	75	2,000	1,596	6,937
Investment Opportunities	24,582	2,805	0	0	742	2,362	15,210	45,701

Alternative D
(Thousands of 1990 Dollars)

	Timber	Recreation	Minerals	Range	Watershed	Wildlife and Fish	Protection	Total
Revenues	45,800	1,500	0	0	0	0	0	$47,300
Expenditures	40,800	14,200	1,500	0	3,000	15,000	35,000	109,500
Operations	16,500	5,000	1,500	0	2,125	8,550	17,000	50,675
Maintenance	500	3,000	0	0	75	1,350	3,000	7,925
Investment Opportunities	23,800	6,200	0	0	800	5,100	15,000	50,900

Table B-28 (continued)
Tongass Forest Budget by Alternative (Average Annual For The First Decade)
Alternative P
(Thousands of 1990 Dollars)

	Timber	Recreation	Minerals	Range	Watershed	Wildlife and Fish	Protection	Total
Revenues	40,600	1,500	0	0	0	0	0	$42,100
Expenditures	37,600	14,200	1,500	0	3,000	15,000	35,000	106,600
Operations	15,500	5,000	1,500	0	2,125	8,550	17,000	49,675
Maintenance	500	3,000	0	0	75	1,350	3,000	7,925
Investment Opportunities	21,600	6,200	0	0	800	5,100	15,000	49,000

Supply Curves

One of the major conclusions drawn from the sensitivity tests on the alternatives was that the value of timber is one of the most important variables in determining the Forest's ability to provide economic timber offerrings.

To address this issue, supply curves were developed for each alternative to show how the Forest's ability to provide economic timber offerrings changes under different market conditions. Historically, the timber market in Alaska has been subject to wide fluctuations in price.

The following supply curves can be used as one indicator to assist in determining what level of supply the Forest could provide. Predicting a future pond log value would be used to develop a timber sale program offer goal for any given year. In this fashion, during years of lower expected pond log values, the amount of timber programmed for offer could be reduced to reflect the likely reduced level of demand. Conversely, in years of expected high pond log values, the programmed timber sale offer could be scheduled at a higher amount to be responsive to the liklihood of increased demand. These supply curves are shown in Table B-29.

Table B-29
Timber Supply Curves

POND LOG VALUE (1990 $/MBF)	TIMBER PROGRAM OFFER				
	ALT. A	ALT. B	ALT. C	ALT. D	ALT. P
$361/MBF	608 MMBF	653 MMBF	761 MMBF	782 MMBF	728 MMBF
$338/MBF	504 MMBF	549 MMBF	657 MMBF	678 MMBF	624 MMBF
$314/MBF	401 MMBF	446 MMBF	554 MMBF	575 MMBF	521 MMBF
CURRENT => $291/MBF	298 MMBF	343 MMBF	451 MMBF	472 MMBF	418 MMBF
$267/MBF	195 MMBF	240 MMBF	348 MMBF	369 MMBF	315 MMBF
$244/MBF	92 MMBF	137 MMBF	245 MMBF	266 MMBF	212 MMBF
$220/MBF	0 MMBF	33 MMBF	141 MMBF	162 MMBF	108 MMBF

Timber program offer any given year is not to be confused with the decadal allowable sale quantity (ASQ) ceiling (usually expressed as an average annual amount). Timber program offer, sell, and harvest is a monitoring item that is reported annually over the decade to annually determine how the Forest is doing in relationship to the decadal allowable sale quantity ceiling.

ASQ Adjustment for Encumbered Lands

The allowable sale quantities displayed in this Supplement assume that lands which are currently in National Forest ownership but are encumbered by the State of Alaska (under the Statehood Act) and Native Corporations (under ANSCA) are part of the tentatively suitable forest lands.

In the event that these lands are transferred to other ownerships, they can no longer contribute to the Allowable Sale Quantity. Approximately 40,000 acres are yet to be conveyed to the Native Corporations and about 174,000 acres are yet to be conveyed to the State of Alaska.

Table B-30 depicts the potential future reductions in ASQ that would occur when all entitlements are conveyed.

Table B-30
Reduction in Allowable Sale Quantity (ASQ) Associated With Encumbered Lands

	Alt A	Alt B	Alt C	Alt D	Alt P
Original ASQ	298	343	451	472	418
Percent Reduction	8%	7%	5%	7%	7%
ASQ Net of Encumbered Acres	274	319	428	439	389

Appendix D

Research Natural Areas

APPENDIX D

RESEARCH NATURAL AREAS

INTRODUCTION

The following narratives briefly describe the potential Research Natural Area (RNA) proposals developed during the Tongass Forest Plan Revision. Each area has a map number (#) which is used to show their location on the map included at the end of the appendix. The RNA discussions are grouped by Geographic Province, as discussed in the Research Natural Area section of Chapter 3, which also explains the process used to identify and set priorities for these potential Research Natural Areas. Within each geographic province the potential RNA proposals are placed into three general priority groupings as developed by the RNA Steering Committee: 1) "priority potential candidate proposals," which are the highest priority RNA proposals identified by the RNA Steering Committee; 2) "other recommended potential candidate proposals," which are RNA proposals redundant with the first group or with key features of lower priority than the first group; 3) "RNA proposals no longer considered," which are proposals which were found to lack the features being sought or with significant resource conflicts which would make them not suitable for RNA designation. Discussions are also presented with each of the RNA proposals resulting from review by the Forest Supervisors and District Rangers.

YAKUTAT FORELANDS GEOGRAPHIC PROVINCE

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Akwe Beach

Map # 54
Yakutat Ranger District
11,032 acres

Akwe Beach contains a representative outer coast and beach segment of the Yakutat Forelands, the only extended length of sandy beach in most of south coastal Alaska. The characteristic alternating dune ridges and low wetlands (swales) of the area are believed to be geologically very recent, perhaps only 2,000 years old. Strong storms and currents of the North Pacific are still building or modifying the beach environments, creating a specialized niche for dune plants, plant communities, shorebirds, marine mammals, and other wildlife.

Akwe Beach is proposed in order to include coastal dune formations, old stabilized dunes and their vegetation, and swale wetlands plant communities. The dune

ridges and swales are thought to be progressively older from the coast inland. A large freshwater lake, Triangle Lake, adds important diversity to the RNA proposal. Potential uncommon plant species include *Atriplex drymarioides*, *Lysimachia thyrsiflora*, and *Saussurea americana*. Significant wildlife habitats include freshwater wetland staging areas for migratory birds, and productive estuary. The area is within the range of moose and the glacier phase of the black bear.

The Forest Service believes that existing cabins and commercial fish use in this area are incompatible with the management objectives of the RNA. Because of this conflicting use, this RNA proposal is not being considered in the SDEIS (Chatham Area Alternative Development Meeting Notes 1 February 1991).

2. Akwe-Ustay Lakes

Map # 61
Yakutat Ranger District
9,786 acres

This area is proposed to include two low elevation lakes at the base of the mountain front overlooking the Yakutat Forelands. Akwe Lake receives relatively small amounts of glacial sediment and is fed predominantly by rainwater runoff and groundwater. Ustay Lake is in contact with the terminus of Rodman Glacier and is cloudy with glacial sediment. The two lakes are especially suited for comparative hydrological studies.

The area offers the opportunity to study new alpine plant communities that have developed where glaciers have retreated in the Yakutat area's recent geologic past. The alpine zone on the mountain knob separating the two lakes may include a glacial refugium of higher plant diversity and should be searched for *Stellaria crassifolia*, *Stellaria ruscifolia*, *Gentiana aleutica*, *Veronica stelleri*, *Castilleja chrymactis*, and *Euphrasia mollis*. Low elevation wetlands should be searched for *Pedicularis macrodonta*. Other features of interest are black cottonwood forest and tall willow shrub plant communities.

3. Mountain Lake

Map # 4
Yakutat Ranger District
5,425 acres

This area encompasses elevations above and below the flooding zone that forms when Hubbard Glacier blocks Russell Fiord and converts it to Russell Lake. When the lake fills to about 150 feet elevation it spills into drainages leading south across the Yakutat Forelands into the Pacific Ocean. The southern portion of the area includes the upper portion of one of these outlets leading to Situk Lake.

Areas below the floodline are covered with a maturing Sitka spruce forest that developed on a former lake bottom sometime after 1150 AD when Hubbard Glacier began its retreat from Yakutat Bay. In 1986, an ice dam temporarily formed and partially flooded the fiord, killing vegetation that was underwater for more than 2 weeks. The ice dam is forming again and may burst as in 1986 or it may stabilize and make the lake permanent.

Low elevation slopes above the floodline support old-growth western hemlock-Sitka spruce forest which is relatively restricted in this part of Southeast Alaska. The area encompasses Mountain Lake, a narrow elongate lake carved into bedrock in a direction parallel to the flow of ice when it filled Russell Fiord. Alpine zones in the area may have been a glacial refugium, and should be searched for *Stellaria ruscifolia*, *Veronica stelleri*, *Castilleja chrymactics*, and *Euphrasia mollis*.

4. Pike Lakes

Map # 51
Yakutat Ranger District
1,822 acres

Pike Lakes are the only lakes in coastal Alaska south of the Alaska Range that are inhabited by northern pike. It is not known how this interior fish species reached the area. The area also includes one of the only coastal stands of the interior variety of lodgepole pine and several ice block depression lakes with different hydrological characteristics.

The area supports examples of old-growth western and mountain hemlocks, lodgepole pine, and Sitka spruce. The old-growth Sitka spruce-western hemlock forest type occurs on larger raised moraines, unlike the great majority of stands of this type in northern Southeast Alaska, which occur on steep unstable mountain slopes. Forest types that have developed on both coarse-textured well-drained soils and poorly drained organic soils are present.

The Pike Lakes RNA should be searched for special plants, especially *Eleocharis kamtschatica*, *Lysimachia thyrsiflora*, and *Pedicularis macrodonta*. The area is within the range of the glacier phase of black bear. Moose browse shrub habitat and graze on aquatic vegetation of the larger lakes. The upper reaches of streams are probably rearing habitat for sockeye salmon. The lakes are locally important waterfowl habitat.

Concern has been expressed about the current and future levels of recreational fishing occurring at Pike Lakes, and the compatibility of this recreational use with the management objectives of a RNA. The Forest Service is therefore proposing this area for the Special Area Land Use Designation instead of a RNA Land Use Designation, which would allow for future managed recreational

fishing to continue while protecting the unique values of the area (Chatham Area Alternative Development Meeting Notes 1 February 1991).

5. Upper Situk

Map # 6
Yakutat Ranger District
2,723 acres

This area is proposed to represent excellent moose habitat in the willows occupying the complex overflow channels of the former Russell Lake, and productive fisheries. When Hubbard Glacier dams Russell Fiord again and causes Russell Lake to spill over to the south this area will be modified again. The segment of the Situk River within the area currently contains high-quality king and coho salmon rearing habitat and supports sea-run cutthroat and fall run steelhead; it has not been stocked. The fishery could be largely destroyed during lake overflow or it may partially survive.

The area should be examined to see if it contains the uncommon plants *Lysimachia thyrsiflora*, *Pedicularis macrodonta*, and *Saussurea americana*.

An existing cabin and high recreational fishing use in this area are incompatible with the management objectives of a RNA. This RNA proposal is not receiving consideration in the SDEIS (Chatham Area Alternative Development Meeting Notes 1 February 1991).

OTHER RECOMMENDED POTENTIAL CANDIDATE PROPOSALS

6. Lost River

Map # 52
Yakutat Ranger District
821 acres

This short river supports a late (February) run of coho salmon, offering a food resource to predators at a critical time of the year. The other features of interest are the shrub communities on the complex former Russell Lake overflow channels.

LYNN CANAL GEOGRAPHIC PROVINCE

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Warm Pass

Map # 2
Juneau Ranger District
10,560 acres

Subalpine fir has a highly restricted distribution in Southeast Alaska. It occurs mainly along a few low elevation corridors into British Columbia. Warm Pass is proposed as an RNA in order to include the northernmost example of subalpine fir in Alaska. The forests of the middle and upper portions of the valley are pure subalpine fir stands. Warm Pass Valley is the only forested portion of the US-Canada border between the Taku River and Chilkat Pass. The valley has been an important migration corridor for interior vegetative species that mix with the coastal forest and tundra. Many of the interior species are rare in the Tongass National Forest. The interior alpine species *Dryas integrifolia* was collected in the RNA in 1988. Other possible uncommon species that should be searched for are *Carex interior*, *Carex atrostachya*, *Cypripedium montanum*, *Calypso bulbosa*, *Geocaulon lividum*, *Thlaspi arcticum*, *Viola selkirkii*, *Chimaphila umbellata*, *Phyllodoce empetriformis*, *Phacelia mollis*, *Plagiobothrys cognatus*, *Castilleja chrymactics*, *Symphoricarpus albus*, *Lactuca biennis*, and *Crepis elegans*.

Warm Pass Valley has a very different climate than most of Southeast Alaska. Because of a pronounced rainshadow effect, annual precipitation is much lower than typical coastal forest and mountains; the total precipitation at nearby Skagway is only 26 inches. The low elevation connection to interior British Columbia allows cold dry air to move through the valley in the winter. Laughton Glacier and an unnamed glacier occupy two tributary valleys on the north-facing side of the Warm Pass Valley. Both glaciers have retreated significantly in the last several decades and appear to be still contracting. A considerable amount of recently deglaciated land is in various stages of plant colonization. The south-facing slopes across the valley a very short distance from the terminus of both glaciers were burned over in a forest fire. This may be the closest that forest fire and glaciers have occurred in North America.

The valley supports a good population of moose that utilize both the alpine shrub belt and riparian shrubs at lower elevations; moose trails and signs of browsing are abundant. Portions of Warm Pass Valley are used intensively by brown bear. Mountain goat inhabit the area.

Preliminary information about Warm Pass has been shared with the British Columbia Ecological Reserves Unit. RNA establishment and documentation here provide an excellent opportunity for international cooperation.

2. Dayebas Creek

Map # 57
Juneau Ranger District
8,724 acres

Chilkoot and Chilkat Inlets at the head of Lynn Canal are funnels for cold winter winds moving down from the low passes at the northern end of Southeast Alaska; this region also has the highest summer temperatures and the least annual precipitation in Southeast Alaska. This climate is highly localized to the long steep fiord walls leading up from tidewater shores. Dayebas Creek is a short tributary valley opening onto Chilkoot Inlet or Tayia Inlet across from Haines. Dayebas Creek is proposed in order to include vegetation growing in this special climatic region including uncommon forest and tundra plants and unusual forest types. The region has served as an important migration corridor for coastal plants moving inland and interior plants moving into the coastal region. The proposed RNA also contains significant mountain goat habitat, an old hanging glacial cirque basin, periglacial features, and a large waterfall.

The lower elevations of Dayebas Creek are covered with a successional paper birch-Sitka spruce forest, one of the only areas of this unusual forest type in the Tongass National Forest. Western hemlock is slowly replacing the birch on all but the rockiest sites. Exceptionally large tree-sized Sitka willows are scattered among the paper birch-spruce stands. These stands appear to have originated from fire, which is very rare on the Tongass National Forest. Some subsequent timber harvesting took place near tidewater. Steep convex slopes have very shallow soils over bedrock that support a dry lodgepole pine-lichen forest type. A mixed subalpine fir-mountain hemlock forest occupies the highest forested elevations. This area has the greatest tree species richness outside the southern fringe of the Tongass National Forest.

Tundra communities above treeline are an unusual mixture of interior and coastal alpine types. Two plants on the list of uncommon Tongass National Forest species were collected in the area in 1988, the interior alpine species *Dryas integrifolia* and *Diapensia lapponica*. The alpine species *Minuartia biflora* was also collected in the area, the first collection in Southeast or coastal Alaska for this species. Identification of other specimens collected late in the 1988 field season is underway. Other possible uncommon species that should be searched for are *Carex interior*, *Carex atrostachya*, *Cypripedium montanum*, *Calypso bulbosa*, *Geocaulon lividum*, *Thlaspi arcticum*, *Rorippa obtusa*, *Viola selkirkii*, *Chimaphila umbellata*, *Phacelia franklinii*, *Plagiobothrys cognatus*, *Castilleja chrymactics*, *Symphoricarpus albus*, and *Crepis elegans*. Within the tundra containing interior plant species are frost-sorted stone nets and other

periglacial features. Steep talus slopes that experience active frost heaving are rich in alpine species although the total plant cover is low.

The lowermost portion of Dayebas Creek plunges over the vertical wall of the fiord forming a large waterfall. The waterfall splashes directly into saltwater. The tidewater shoreline of the area runs almost directly north and south except for a short east-west segment immediately south of the waterfall. The short east-west ridge is bathed in spray rising vertically from the splash zone of the waterfall and is covered in a lush growth of mosses and lichens which should be searched for unusual species.

Lush alpine meadows that have not been recently glaciated provide excellent mountain goat foraging habitat. Evidence of goat grazing is abundant and at least two bands of goats were seen during the 1988 site visit. The area has other important features of goat habitat including cliffs that serve as escape terrain and easy access to both high elevation summer habitat and low elevation winter habitat.

Alaska Power and Telephone has identified this site as a potential hydropower development area (reference letter of). A potential transportation route up the east side of Lynn Canal would affect portions of the Dayebas drainage. At this time, Dayebas Creek is recommended as a "deferred RNA" until more is known about the potential hydropower development and transportation route.

OTHER RECOMMENDED POTENTIAL CANDIDATE PROPOSALS

3. Lower Endicott River

Map # 44
Juneau Ranger District
9,418 acres

Endicott River served as an outlet for glacial meltwater flowing eastward from Glacier Bay when the Grand Pacific Glacier filled the bay 200 years ago. As the glacier thinned and retreated, a low ridge at the head of Endicott River (Endicott Gap) emerged and rerouted the water and cold air southward down Glacier Bay. Vegetation of the Endicott River watershed has thus developed under both ice-affected and ice-free conditions during the last several centuries. The lower watershed is at the edge of the special northern Lynn Canal climate of drier and more continental conditions.

The interior alpine species *Dryas integrifolia* has been collected in the vicinity. *Cypripedium montanum*, *Chimaphila umbellata*, and *Euphrasia mollis* have been collected across the divide in Glacier Bay National Park. *Lactuca biennis* has been collected north of the RNA near Davidson Glacier. Other possible uncommon species that should be searched for are *Carex interior*, *Carex*

atrostachya, *Thlaspi arcticum*, *Viola selkirkii*, *Castilleja chrymactics*, and *Crepis elegans*. The distribution of these species in the lower Endicott River watershed is not well understood, and additional collections are needed. The William Henrey Mountain area appears to have the highest potential for the uncommon plants.

This area offers the opportunity to conduct watershed studies, especially the development of aquatic and riparian ecosystems in relation to glacial outwash events. The area also contains western hemlock-Sitka spruce forest communities typical of the northernmost portions of the Tongass National Forest. This proposal is entirely within designated wilderness, A future possible road connection route between Haines and Juneau may access the lower Endicott River drainage outside of the Wilderness; such access may improve research opportunities for this area. Future road access will require more intensive management to maintain the qualities of the area as an RNA.

4. Berners-Lace River

Map # 3
Juneau Ranger District
23,964 acres

The Berners-Lace River RNA proposal is designed to encompass two contrasting low elevation major river segments and associated ecosystems. The Lace River floodplain is a poorly vegetated, braided river channel that is typical of glacially-fed rivers. Sediment from glacial meltwater builds up on the bed of the river faster than the river can transport it away. The active river channel eventually becomes higher than the surrounding landscape and during a high water event (sometimes a prolonged period of warm, dry weather that causes high glacial melt) the river spills over into surrounding lower terrain and abandons the old channel. This process has formed a typical broad, meandering, and poorly vegetated glacial floodplain at Lace River.

Berners River received great volumes of meltwater from the glacier flowing south off Sinclair Mountain, until the glacier retreated far enough to expose a low bedrock divide at the head of Berners River valley. The entire meltwater flow has since been routed down the Lace River drainage. Berners River is now a classic underfit river, one that is considerably smaller than that of the flow regime that formed its valley.

The continued buildup of sediments at the mouth of Lace River in upper Berners Bay is damming up the mouth of Berners River. As a result, the broad floodplain of Berners River is a very large and dynamic wetland complex. Vegetation of the Berners valley is predominantly submerged and emergent aquatic plants with fringing freshwater sedge marshes. The valley is prime moose, waterfowl, and furbearer habitat. The sloughs and lakes connected to the Berners River channel are excellent anadromous fish habitat. Several well-worn trails along

the sides of the valley and other sign attest to a large population of brown bear.

The vegetation of Berners River valley suggests that a rise in water level from the damming action at the mouth of the river continues. Shrubs that once occupied raised levees are now being drowned, and extensive areas of floating mat vegetation occupy the valley. As a result, unlike much freshwater wetland vegetation in Southeast Alaska, the Berners River wetlands are being renewed and are not degenerating into acidic muskegs with low wildlife productivity.

A young cottonwood forest occupies point bars along the active channel of the Berners River floodplain. Slopes on either side of the valley are covered with a northern variant of western hemlock-Sitka spruce forest types.

The Tongass Timber Reform Act designated this area as a "Legislated LUD II."

5. Katzehin River Meadows

Map # 58
Juneau Ranger District
5,282 acres

As one travels north along Lynn Canal, Katzehin River is the last major river flowing west from the mainland before the special climatic zone at Skagway. An RNA is proposed here to include productive and species-rich alpine and subalpine meadow communities, treeline mountain hemlock sites, and a northern example of western hemlock-Sitka spruce communities. The area contains extensive summer grazing habitat for mountain goats. Goat trails, terraces, and droppings are widespread and goats are consistently observed in the area during the summer.

Treeline plant communities include a mountain hemlock-copperbush (*Cladothamnus pyrolaeflorus*) open woodland. Extensive *Lutkea pectinata* patches cover talus and semi-stabilized boulders. Shallow depressions collect thick snowbanks and are species-poor, mainly a *Phyllodoce aleutica-Cassiope mertensiana* community. Meltwater coming off persistent snowbanks however produces a snowbank community that is rich in herbs, including species of *Saxifraga*, *Valeriana*, *Campanula*, *Anemone*, and *Viola*. Above treeline are an open grass and sedge subalpine meadow. Species that are common there include *Carex nigricans*, *Luzula parviflora*, *Deschampsia caespitosa*, *Phleum commutatum*, and *Trisetum spicatum*.

Western hemlock-Sitka spruce forest types occupy the lower elevation slopes. Forests on the south-facing slopes above Katzehin River are especially large and well developed for a site so far north in the Tongass National Forest. The north and west-facing slopes of the RNA are especially steep and broken by cliffs even though there is a nearly complete forest canopy. Where groundwater

moves over the cliffs and steep slopes by sheet flow, a Sitka spruce/devil's club forest type occurs.

The lowermost portion of the area includes a section of the braided channel of the Katzehin River. Sediment from meltwater at the terminus of Meade Glacier is causing the Katzehin River to aggrade or build up its bed. The active river channel has shifted frequently, and most of the floodplain is in very early vegetative succession. Even though total plant cover is low on the floodplain, a distinctive set of species is found in the open and changing habitat. The terminus of Meade Glacier has retreated and thinned considerably in the last several decades, but a minor readvance of only a few kilometers would bring it to the edge of the RNA.

COAST RANGE GEOGRAPHIC PROVINCE

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Blue Lake Lava

Map # 24
Misty Fiords National Monument
19,323 acres

This proposed RNA is located along the US-Canada border and contains a recent lava flow that originated in British Columbia. Because of its southerly location and connection to a valley leading into British Columbia, the area may contain some plant species uncommon on the Tongass National Forest and stands of subalpine fir. The area is also proposed in order to obtain examples of mountain hemlock forest types on soils not affected by the recent lava flows. The British Columbia Ecological Reserves Unit has been informed of the RNA proposal and are interested in international cooperation.

A radiocarbon sample of a log at the surface of the lava was dated at 360 plus or minus 60 years. Two other flows overlap the main, dated flow. Their form as well as younger vegetation on them suggest that there were two periods of volcanic activity more recent than 360 years ago. The lava flows contain smooth, ropy "pahoehoe" surfaces and blocky "ah-ah" deposits. Isolated "islands" of forest surrounded by recent lava called steptoes are present. A cone near the lower end of the flow probably represents a secondary vent. Lava contraction (from cooling) features such as drainage gutters and circular pits occur in the area, too. The area should be searched for lava tube caves.

The volcanic vent is 5 kilometers north of the U.S. border in British Columbia. The vent erupted laterally near the terminus of a small valley glacier. The flows moved south 12 kilometers down Lava Fork River, continued across the border

and spread into a fan at the confluence with Blue River, damming it to form Blue Lake. The lake gets its name from the blue or aquamarine color of the water that is caused by the Tyndall effect; light is refracted on the suspended clay particles in the water. The lava continued south about 9 kilometers down Blue River valley and then stopped. There are numerous small ponds on the lava surface where water has filled depressions.

Plant succession has been relatively rapid on the lava because of the high rainfall environment of Southeast Alaska. Vascular plant communities have developed where fine soil particles collected on the lava. On some lava surfaces black cottonwood trees have developed an unusual growth form with multiple root crowns and adventitious roots extending from the stem out across the surface. Lush mats of moss and rich lichen beds are found on portions of the lava surface. However, most of the lava is still barren rock. The area offers the opportunity to compare rates of weathering of lava surfaces with other environments in the world, and is of special interest because of the unusual combination of cool and high rainfall conditions.

The Forest Service believes that this area is better suited to the Special Areas Land Use Designation instead of an RNA.

2. Martin River

Map # 78
Misty Fiords National Monument
6,213 acres

This area would target study of riparian spruce and brown bear along a major mainland stream. The Martin River site appears to have better spruce stands than other proposed locations, avoids anticipated recreation uses, and has the added benefit of being adjacent to the existing Red River RNA. Access to Martin River can probably be by water; other proposed sites would require a helicopter.

3. Robinson Lake

Map # 50
Misty Fiords National Monument
4,297 acres

This area is focused on a natural slump lake, forest types typical of the southern portion of mainland Southeast Alaska, and some uncommon plants of restricted distribution in Alaska that may occur in the area. Robinson Lake formed in recent years when a natural earthslide dammed Robinson Creek. The geomorphology and stream morphology of the area have been intensively studied by the Juneau Forestry Sciences Laboratory. The area extends to the shore of Behm Canal in order to include habitat diversity associated with the shoreline and proximity to deep water. Warmth given off by deep water often delays the onset of winter snows, reduces total snow accumulation at low elevations, and initiates early snowmelt in the spring.

There has been little study and documentation of terrestrial vegetation and wildlife features in the area. The area probably contains examples of the western hemlock/swordfern type, the western redcedar/swordfern type, and relatively minor amounts of riparian Sitka spruce forest. Higher elevations probably contain mountain hemlock types, and high and low elevation muskegs are present. Uncommon species of the Tongass National Forest that should be searched for in the area are *Caltha biflora*, *Monotropa uniflora*, *Platanthera gracilis*, *Oxycoccus palustris*, and *Lycopus uniflorus*.

4. Twin Lakes

Map # 56
Wrangell Ranger District
7,202 acres

The Stikine River is one of the few low elevation corridors from the interior of Canada that reaches the coastal forest region of Southeast Alaska. The river carries a heavy glacial sediment load and has a typical braided floodplain with much early successional shrub vegetation. The Twin Lakes area includes extensive willow stands on the Stikine floodplain that are continually renewed by the river and are excellent moose habitat. The Stikine floodplain is one of two locations in Alaska where garter snakes have been collected, probably as the result of their rafting down the Stikine River. The long-toed salamander has also been reported from the floodplain, and the spotted frog is expected to be present. Twin Lakes (also known as Figure Eight Lake) is located in the center of the area. The lake serves as an important coho salmon rearing habitat and supports sea-run cutthroats that overwinter there.

Two special vegetation types occur in the area. Higher terraces above the river support a tall black cottonwood forest, sometimes with a successional Sitka spruce understory. *Salix interior* is reported to be a dominant early successional plant on sandy river bars in this section of the Stikine River, but specimens to verify the report are not available. This would be the only known occurrence of *Salix interior* in Southeast Alaska. Slopes above the river support western hemlock forest types under the influence of down-canyon winds.

A plant new to the flora of Alaska, *Angelica arguta*, was reported in the Kakwan Point area; specimens in flower should be collected and checked carefully against *A. lucida* and *genuflexa*. *Cardamine pratensis* was reported in the RNA near Twin Lakes, a significant southern range extension for this species. *Limosella aquatica* and *Listera convallarioides* were reported in Southeast Alaska for the first time in the Kakwan Point area. Specimens for all these reports should be collected and, if verified, should be preserved in Alaska herbaria. The uncommon plant *Lysimachia thyrsiflora* has been collected in wetlands south of the mouth of the Stikine River and should be searched for in the RNA. Other uncommon plant species that may occur are *Nymphaea tetragona*, *Caltha biflora*, *Spiraea douglasii*, and *Mimulus lewisii*.

A low-grade geothermal system occurs in the area. Two tepid springs issue from host rock just a few meters above the level of Twin Lakes on its northwest shore. One spring emerges from boulders at the base of an avalanche chute. The other spring emerges from alluvium at the base of a cliff. Bedrock in the immediate vicinity of the springs is a foliated, medium-grained quartz diorite. During high water stages on the Stikine River, the water level of the lake is raised, possibly flooding the springs.

One geothermal spring has a reported summer temperature of 21 degrees C, the other a temperature of 18 degrees C. Summer temperature of the springs may be lower than the winter temperature; a reading of 26 degrees C was obtained one winter. Cold surface water flows more readily down a cliff face above the springs during the warm season, diluting the heated water. Total dissolved solids and silica content are low as would be expected in a low-grade geothermal system, although magnesium content is relatively high. There are no hydrothermal deposits. The waters of the springs have a neutral pH.

Relatively "high" amounts of recreation use occur in conjunction with a cabin and the lakes. RNA establishment would require coordinated management and monitoring to maintain the qualities of the RNA. There is a potential transportation route proposed along the Stikine River; until more is known about the route this area is recommended as a "deferred RNA."

OTHER RECOMMENDED POTENTIAL CANDIDATE PROPOSALS

5. Anan Creek

Map # 26
Wrangell Ranger District
17,586 acres

Anan Creek is designed to include a watershed with an exceptional fishery and concentration of bears. Anan Creek supports a particularly productive pink salmon fishery; the long-term mean escapement is 200,000 pinks, one of the largest salmon runs in all of Southeast Alaska. Chum, chinook, coho, and sockeye salmon, and Dolly Varden char, steelhead, and cutthroat trout are also present. Anan Creek has gravels of the ideal size for spawning salmon, a constant flow of very clean water, and very low content of fine particles that clog the circulation of oxygen-rich water through spawning beds. Anan Creek plunges over two waterfalls in its lower section between Anan Lake and Bradfield Canal. The first (lower) waterfall is passable, but an obstacle to salmon migrating upstream to the extensive spawning habitat of Anan Creek and Anan Lake and Boulder Lake. A fish ladder in a tunnel has been installed on the first falls. The second falls delays fish passage and is about 2 meters high.

The largest known concentrations of black bear in the Tongass National Forest gather here to fish for salmon; as many as 50 different black bears have been counted at the falls during a period of several days at the peak of salmon migration. Two bear observation stations have been constructed near the two waterfalls. The abundance of fish schooled up at the base of the falls, or leaping through the obstacles attract the black bears. Despite the heavy black bear use of the area, brown bear are not uncommon on Anan Creek. Beaver are also abundant and a series of beaver ponds and channels are found above the falls.

Anan Creek is a new "Legislated LUD II" as a result of the Tongass Timber Reform Act.

6. Yehring Creek

Map # 59
Juneau Ranger District
19,065 acres

The Taku River is one of the few low-elevation corridors into interior British Columbia from coastal Alaska. Plant species have used this corridor as a migration route resulting in some interesting forest and tundra types. This area is proposed in order to include a short tributary stream to the Taku River that supports productive fisheries and a representative sample of plant communities along the river corridor. Yehring Creek is a rearing habitat for coho and sockeye salmon, and supports sea-run cutthroats and spring runs of steelhead. This stream has not been artificially stocked so the fish are native genotypes.

Taku Glacier blocked and dammed Taku River until the last few centuries. Recent measurements of ice volume and movement in the Juneau Icefield suggest that the Taku Glacier is in an active building phase and will dam the river again relatively soon. The lower portion of the RNA would probably be flooded when the ice dam forms. Fish populations and habitat of the entire Taku River watershed would be drastically affected by the formation of an ice dam and blockage of access to saltwater.

Subalpine fir has been collected on the outwash of Wright Glacier in the northern portion of the area along the Taku River lowlands. Extensive black cottonwood forest stands are found along the Taku River floodplain. Mountain hemlock forest types are typical of the upper slope forests in the area. Total forest cover is low because most of the area has a north-facing aspect and much of this steep watershed basin is above 500 meters in elevation. *Viola selkirkii*, a rare plant species in Alaska, may occur in the RNA and has been collected nearby.

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Crater Ridge-Freds Creek

Map # 20
Sitka Ranger District
8,630 acres

This area has been proposed in order to include examples of several major volcanic landforms and a small watershed under the unique hydrologic influence of volcanic ash soils. The area has been the subject of intensive study both from the standpoint of soils morphogenesis and ecosystem succession (Klinger, 1988) and geologic studies (Dave Brew, Jim Riehle, U.S. Geological Survey).

Crater Ridge is a caldera (collapsed volcanic summit) on a subsidiary volcanic cone 3 kilometers northeast of Mount Edgecumbe. Crater ridge is a composite dome (made up of lava flows alternating with ash) and stands about 500 meters in elevation. Two small lakes currently occupy a minor portion of the floor of the caldera although some volcanic deposits suggest that an eruption once took place in a large caldera or "crater" lake. The profiles of Mount Edgecumbe and Crater Ridge are smooth and symmetrical, evidence that they were not carved by glaciation and thus were erupted since the end of the last Ice Age 14,000 years ago. Radiocarbon dates indicate that the various volcanic layers were erupted over a time period lasting a few hundred to 2,000 years, just prior to 9,000 years ago. A relatively thin ash layer was laid down in one or two later and final eruptions about 5,000 years ago. Buried trees and soil indicate that forest vegetation was well developed on the volcano before the final eruption. The south Kruzof volcanic field contains tholeiitic basalt and younger calcalkalic flows and pyroclastic rocks. The volcanic activity on Kruzof is of particular interest as it is related to plate movements and the complex process of terrain accretion which occurred during the late Cretaceous and early Tertiary time, and subsequent crustal movements.

Freds Creek drains the east slope of the crater summit. This watershed from summit to tidewater will allow studies of the influence of recent volcanic ash on stream flow regime and water chemistry. Porous ash soils can store large volumes of water and releases it steadily so that it stabilizes stream flow and temperatures.

Important forest types in the area include western hemlock and riparian Sitka spruce; both are growing on special soils which may produce variants of the "typical" forest type. Small areas of western hemlock/Alaska-yellow cedar and muskeg occur in the area also. *Agrostis thurberiana*, a wetland grass species on the list of uncommon Tongass National Forest plants, has been collected in the vicinity and should be searched for in the area. The area is also at the

northern limit of salal (*Gaultheria shallon*). Klinger (1988) describes in great detail a transect from near sea level to high elevations on Mt. Edgecumbe including information on soils chemistry, forest composition, age, and structure. His data have been used to propose his controversial ideas relating to the role of *Sphagnum* mosses in bog formation and forest decline, with its implications for atmospheric chemistry. Long-term protection and monitoring of these sites could eventually test whether these hypotheses explain the natural successional processes occurring over this complex terrain.

Recreation is an important use of the Crater Ridge-Fred's Creek area. There is a public recreation cabin, and the Mount Edgecumbe National Recreation Trail. The existing and potential future recreation use in this area is not compatible with the management objectives of a RNA. In the SDEIS, this area is recommended as a Special Area Land Use Designation instead of a RNA Land Use Designation, which would provide for managed recreation use while protecting the unique geologic features of this area (Chatham Area Alternative Development Meeting Notes 1 February 1991).

2. Myriad Islands

Map # 14
Sitka Ranger District
302 acres

Myriad Islands are a set of numerous wave-battered, low elevation islands fronting the open North Pacific Ocean in the West Chichagof-Yakobi Wilderness. An RNA is proposed here to include islands of all sizes demonstrating biogeographic effects due to size and isolation from Chichagof Island, probable nesting habitat of the marbled murrelet, and the Sitka spruce/Pacific reedgrass forest type. The degree of isolation from Chichagof Island is unknown as some islands are only 1/4 mile from Chichagof and Herbert Graves Islands. Marten, an introduced species to islands in Southeast Alaska, is present on Chichagof and Herbert Graves Islands, but their absence or presence on the Myriad Islands is unknown. Cooperation with the State of Alaska would allow the establishment of a reserve on adjacent intertidal and subtidal habitats that are closely linked with island ecosystems. Rich kelp forests, shellfish beds, and populations of sea otters are important features of the state tidelands.

This area is free from local and regional sources of air pollution; winds arriving at the area have been cleansed by a long passage over the North Pacific Ocean. The area would make an excellent global background air quality monitoring site. It represents one of the most outstanding opportunities to study island biogeographic effects in north temperate marine and terrestrial ecosystems in the National Forest system. The islands are popular with ocean kayakers.

3. Plotnikof-Port Banks

Map # 45
Sitka Ranger District
16,723 acres

This area is proposed to include an oligotrophic rock basin lake system with high fisheries diversity, riparian Sitka spruce, western and mountain hemlock types, Alaska yellow-cedar, and muskegs. Two uncommon plants of the Tongass National Forest that may occur in the area are *Poa leptocoma* and *Stellaria crassifolia*.

Ice Age glaciers carved the southern portion of Baranof Island into a series of parallel northeast-southwest trending fiords and U-shaped valleys. Port Banks is a fiord-like inlet that runs perpendicular to the orientation of most of the fiords of the island. Upstream from Port Banks the glacial U-shaped valley connected to it curves back to the general orientation of the island's fiords. The valley is occupied by two large lakes, Plotnikof and Davidof. Davidof Lake is a low elevation hanging cirque basin lake in the upper watershed. The watershed supports a summer run of steelhead, coho salmon rearing habitat in the lakes, an early run of coho, and overwintering populations of sea run cutthroat or Dolly Varden.

The lower segment of the area contains shoreline along Whale Bay and some exposed open coast of the North Pacific.

The Chatham Area indicates there is "intense" recreational interest in the Plotnikof-Point Banks area. Two public recreation cabins and trails are present in the area. The fisheries resources were probably modified through some past management activities.

OTHER RECOMMENDED POTENTIAL CANDIDATE PROPOSALS

4. Lake Eva

Map # 17
Sitka Ranger District
5,172 acres

The Lake Eva area is proposed to represent a highly productive sockeye fishery with an active history of research (Robert Armstrong's classic studies of arctic char, for example). Forest types present are typical spruce and hemlock, which have potential to serve as baseline monitoring sites for adjacent managed areas. Logging activity began in nearby watersheds in the 1960' and 70's. Lake Eva is a low elevation (less than 70 meters above sea level) valley morainal lake. The lake is about 3 kilometers long by 0.5 kilometers wide. The features present in the Lake Eva RNA partially overlap the proposed Plotnikof-Port Banks RNA. Lake Eva is much better studied than Plotnikof-Port Banks and it is more accessible to researchers. However, regional direction for RNA's requires that

features that can be found in LUD 1's (designated Wilderness Areas) be selected in preference to other more intensive land uses. Plotnikof-Port Banks is a LUD 1 and Lake Eva is designated LUD 2. A public recreation cabin, two shelters and a trail constructed in the 1930's by the Civilian Conservation Corps exist in the area.

5. Redoubt Lake

Map # 55
Sitka Ranger District
6,453 acres

Redoubt Lake is one of the only large meromictic lakes in the Tongass National Forest. Meromictic lakes are characterized by a stable bottom layer that does not mix or "turn over" during the fall when cooling surface waters sink. This sinking action or annual flushing is important in aquatic ecosystems because it brings nutrients back up from the depths into the upper layers where they are available for use by photosynthetic organisms.

The factor responsible for the meromictic character of Redoubt Lake is the presence of a marine saltwater layer at the bottom of the lake. The surface of Redoubt Lake is only slightly above sea level and the lake is separated from Redoubt Bay only by a bedrock sill at the outlet. High tidal or storm surges push saltwater over the sill. Saltwater is more dense than the freshwater of the lake and settles to the bottom no matter what the temperature.

The saltwater/freshwater density-stratified water column represents a chemocline. Once in place the salt layer is generally stable and will not allow mixing. Nutrients contained in dead organisms filtering to the bottom are trapped in bottom sediments and subtracted from the ecosystem. However, freshwater springs seeping through fractures in bedrock may enter the bottom of the lake and gradually degrade the chemocline by dilution until it is renewed by saltwater intrusion. In some situations meromictic lake systems have been reported to act as effective concentrators of solar energy in the unmixed bottom layer, producing unusually warm temperatures at the bottom. Redoubt Lake offers the opportunity to conduct studies of these physical and ecological phenomena.

The watershed of Redoubt Bay has a history of some logging dating back to Russian colonial times. Present management on adjacent State Lands may have an affect on this area. The watershed has been stocked with game fish and the lake was fertilized at one time in an unsuccessful attempt to increase its productivity for game fish. Currently the Forest Service and Alaska Department of Fish and Game are experimenting with sockeye egg incubation; there may be possible future lake fertilization projects. The area contains a public recreation cabin and an administrative cabin. A hand-operated tramway has allowed small boat access to the lake; the tramway is to be reconstructed in 1990. Sport fishing use is relatively high. The area also contains a cultural site.

6. Lover's Creek

Map # 23
Sitka Ranger District
3,415 acres

An RNA is proposed here in order to represent several phenomena associated with exceptionally high precipitation. This area is located in possibly the highest rainfall zone in North America. The official Weather Service station at Little Port Walter, a few kilometers east of the RNA, records a long-term average annual precipitation of 569 cm (224 inches); the 1987 annual total was 742 cm (292 inches). Because of orographic uplift (winds forced to rise over mountains), total precipitation in the upper elevations of the RNA is likely significantly higher.

This area contains productive fisheries, and alpine, rock and snow avalanche communities that occupy unusually low elevations. The proximity of the area to the open North Pacific and the unimpeded movement of storms into the area from the southwest probably result in a low freezing level and high snowfall total. As a result, treeline occupies a low elevation and much of the vegetation of the steep watershed basin is alpine tundra.

The Lover's Creek area is of interest because it displays Sitka spruce-western hemlock and yellow-cedar forest types that have developed under high rainfall conditions. The area should be searched for the uncommon plants *Agrostis thurberiana*, *Stellaria crassifolia*, *Rhododendron camtschaticum*, and *Mimulus lewisii* (collected 12 kilometers to the north at Cliff Lake).

Fisheries research has occurred in this proposed area since 1934, providing possibly the longest continuous record of pink salmon production on the Pacific coast. A record of air and water temperatures and stream discharge is available from the site, as well as biological information on salmon. It has been proposed for designation as an RNA as early as 1972 by the National Marine Fisheries Service and a variety of State-wide and region-wide scientific committees.

Vegetation of this area is similar to Plotnikof-Port Banks, although the high rainfall, record of environmental data, and research history make it unique.

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Tonalite Creek

Map # 13
Sitka Ranger District
9,515 acres

This area is proposed in order to represent a pristine example of riparian spruce, productive bear and fisheries habitat, western and mountain hemlock, muskegs, and yellow-cedar vegetation types. There is a long history of fisheries, hydrology, and brown bear research, and one of the most productive salmon fisheries in Southeast. The research was undertaken to establish a baseline of information against which to measure the effects of road construction and timber harvest.

This RNA proposal provides similar ecosystem features as the Chaik RNA proposal. In the DEIS, Chaik was recommended over Tonalite because Chaik was in existing Wilderness and Tonalite was a LUD IV; the Regional Guide directs that first priority for RNA's will be given to Wilderness Areas and LUD II areas. With the Tongass Timber Reform Act, Tonalite is now a legislated LUD II area. The RNA Steering Committee now recommends that Tonalite be designated a RNA instead of Chaik.

2. Gambier Bay

Map # 16
Admiralty Island National Monument
4,777 acres

Gambier Bay was named for an official of the British Admiralty office during the voyages of the explorer Captain George Vancouver. The area is proposed as an RNA in order to include productive wildlife habitat and a variety of special geological features. The Gambier Bay area includes the shoreline of Snug Cove, a shallow arm of the restricted-circulation bay, and a segment of rocky shoreline along Stephens Passage. A Forest Service recreation cabin adjacent to the proposed RNA accommodates visitors. The Gambier Bay shoreline is a popular brown bear hunting area. The diverse geology, and the forests that have developed in response to the diverse geology, have been the subject of recent study, including the establishment of four intensively mapped permanent forest reference plots (0.1 to 0.25 ha, data available from Alaback and Juday), one of which has been monitored since 1979.

The shoreline of the Snug Cove portion of the area supports a very high density of nesting bald eagles. The area supports a high population of Sitka black-tailed deer and is representative of high-quality, low elevation old-growth forest habitat important for foraging and shelter from snow. Brown bear are numerous in the

area. The extensive tidal flat in Snug Cove is an integral part of the ecosystem of the area and is heavily used by shorebirds such as lesser yellow legs, Bonaparte's gull, sandpipers, turnstones, and plovers and to a lesser degree by great blue heron and robin. Significant numbers of migrating ducks and geese have also been reported in the area and especially in rafts or groups on the bay surface. Cooperation with the State of Alaska may allow a state reserve on the tidelands to complement the RNA.

The peninsula that divides Snug Cove from Stephens Passage (Gain Peninsula) is made up of vertically standing dolomite and limestone bedrock layers. The limestone surface is marked by solution pits - circular depressions formed by the acid groundwater dissolution of limestone bedrock. The internally-drained and nutrient-rich limestone soils produce a superlative old-growth western hemlock forest with many very large trees. Several underground streams can be heard flowing down in the limestone rock. Although the surface has no live streamcourses, cold springs emerge at the limestone-basalt contact near the Stephens Passage shoreline.

Much of the low elevation shoreline of the area is marked by a coastal staircase bench - a series of terraces and small cliffs formed by wave erosion at different past relative sea levels. These well-drained surfaces also support old-growth forest, although landslides and boulders are occasionally dislodged from the rim of the cliffs, destroying small patches of forest.

Rocky beach on the tip of Gain Peninsula and nearby Gain Island are hauling-out grounds for sea lion. Harbor seal are common in the bay.

The area contains a diverse set of plant communities representative of Admiralty Island. Sitka spruce/Pacific reedgrass open forest is found in a thin fringe along the Stephens Passage coast. Several western hemlock-Sitka spruce forest types are present, especially the Alaska blueberry and rusty menziesia types. Shore pine/Alaska yellow-cedar and shore pine/black crowberry conifer woodland is typical of low elevation muskegs. A thin strip of large Alaska yellow-cedar trees is found along the margin of the larger muskegs and wetlands.

Well over 100 vascular plant species have been collected or noted in the area; the list of species collected, noted, or expected in the vicinity totals 430. The coastal fringe, especially along Snug Cove, is characterized by coastal elymus, Bering hairgrass, and lyngby sedge herbaceous types in decreasing elevation. The lower end of National Forest ownership (mean higher high tide) and the beginning of state tideland ownership occurs somewhere in this sequence.

High value recreation use including an existing cabin is in conflict with the management objectives of a RNA. Firewood gathering has affected a portion of

the area. The Forest Service does not recommend Gambier Bay as a RNA (Chatham Area Alternative Development Meeting Notes 1 February 1991).

3. Tiedeman Island

Map # 10
Admiralty Island National Monument
4,750 acres

Tiedeman Island is in the center of Seymour Canal, a large inlet surrounded by Admiralty Island National Monument and Wilderness. The Tiedeman Island area is proposed in order to include exceptionally high-density bald eagle nesting habitat in an RNA and maintain the continuity of long-term eagle studies. The proposed RNA also includes the nearby Bug Islands in addition to Tiedeman Island, at the recommendation of the U. S. Fish and Wildlife Service. Muskeg and beach forest types are included in the area. The area is linked through the eagles (feeding on fish) to the marine ecosystem of Seymour Canal.

On Tiedeman Island, mature forest covers about 30 percent of Admiralty Island. Most of the remainder supports muskeg and low productivity open woodland types, only one lake and one watershed exist on the Island. Elevations on the island are below 200 meters.

A great variety of high-quality food is available to bald eagles. Fish comprise the greatest portion of the diet, although seabirds and waterfowl are seasonally important. Eagles of the area have been observed eating salmon, pollack, cod, herring, smelt, sculpins, rockfish, flounder, and halibut. Scoters, scaup, goldeneye, bufflehead, ducks, and geese are important winter food. Carrion is available in the form of seals, sea lion, deer, bear, whales, and other wildlife.

The fringe of tall mature Sitka spruce around the perimeter of Admiralty Island provides ideal nesting platforms and lookout perches. In addition to bald eagle habitat, the islands may serve as important deer winter ranges. Vancouver Canada geese nest in the area, both in the trees and on the ground.

4. Pleasant Island

Map # 5
Hoonah Ranger District
5,256 acres

The western portion of Pleasant Island is an important field site for researchers studying ecosystem development on recently deglaciated land surfaces in Glacier Bay National Park. Pleasant Island was not covered by neoglacial advances which so drastically affected Glacier Bay as recently as two centuries ago. The island is one of the closest areas with old-growth forest, lake and muskeg ecosystems to compare with the successional surfaces in Glacier Bay National Park, and has been actively used in plant succession, ecosystem processes, aquatic ecology, and soils studies.

Geologically, Pleasant Island consists of relatively young (Tertiary: Oligocene to Miocene--about 25-16 million years old) andesitic lava flows and breccias that unconformably overlie an uneven surface that cuts across much older (late Silurian: about 420-410 million years) sandstone and siltstone turbidite beds. The latter were folded, otherwise deformed, and eroded before the flat-lying tertiary volcanic rocks were erupted. "The Knob" on the island is an undated plug of basalt; it is probably the same age or younger than the other volcanic rocks. The Silurian strata are part of a very widespread group of formations that occur throughout the Alexander Archipelago. The tertiary volcanic rocks are part of a narrow belt that extends from north of Glacier Bay proper across much of Southeastern Alaska to the Misty Fiords area on the south.

Pleasant Island includes a wide representation of upland and wetland ecosystems typifying much of the northern interior island province. Muskegs include 20 species of vascular plants and 12 species of mosses and liverworts not found at low elevations in Glacier Bay. Good examples of old-growth mixed western hemlock and Alaska cedar forests occur in the eastern portion of the island. On the western portion of the island the forest primarily occupies steeper slopes along streams. The youngest surfaces, a peripheral zone near shore are covered with Sitka spruce.

Recent and ongoing studies by Daniel Engstrom have focused on the hydrological processes that operate in the complex of old-growth forest and muskeg ecosystems on the island, and an age sequence of lakes on the island. The aquatic ecosystems on the proposed Pleasant Island RNA are being used for comparisons with a wide range of aquatic ecosystem age classes in Glacier Bay National Park. Radiocarbon dating suggests some of the bog basins on Pleasant Island may be greater than 14,000 years old. Pollen and peat accumulation in lake sediment and in bogs there provide an important long-term record of large-scale ecosystem changes of significance to the Glacier Bay area as a whole.

Pleasant Island supports significant populations of bald eagle, Sitka black-tailed deer, and Vancouver Canada goose.

Access to the area is particularly good; Gustavus airport is just a few kilometers north across Icy Passage.

5. Upper Tenakee Inlet Hot Springs

Map # 9
Sitka Ranger District
15,651 acres

This is one of the few remaining pristine hot springs in Southeast Alaska. The hot water flow is concentrated in two main vents and several seeps that emerge through riparian gravel at the foot of a steep hill. The main pool is reported to

have a water temperature of 76 degrees C, making it a medium-grade geothermal system. The flow rate of the combined springs is about 90 liters per minute, a moderate to low rate of flow. Sulfur content is distinctly higher (about 220 mg per liter) than at Bailey Bay Hot Springs. A large pool of hot water is generally clear and has several large old logs in it. A late winter visit during a heavy snow year showed that geothermally heated ground covers a large area around the hot springs vents.

No plant collections have been reported from the hot springs but the warm to hot soils and the special chemistry of the water could be expected to produce at least some major range extensions. Uncommon species of the Tongass National Forest that should be searched for include *Scheuchzeria palustris*, *Poa laxiflora*, *Juncus nodosus*, *Geocaulon lividum*, *Stellaria crasifolia*, *Rhododendron camtschaticum*, and *Lycopus uniflorus*. Lush moss communities line the edge of the pool. Tracks around the pool indicate that the hot springs is probably a seasonal wildlife concentration area, especially for deer and songbirds. Red squirrel were observed to be numerous and active unusually early in the year.

The entire mountain south of the hot springs is included in the RNA proposal in order to encompass the groundwater infiltration and recharge zone affecting the hot springs vents. Lengths of the unnamed river above and below the hot springs discharge zone are included in order to allow studies of the stream before and after mixing with the hot water. The RNA proposal extends across lowlands, heavily used by wildlife, to the shore of Tenakee Inlet.

A potential road corridor likely conflicts with the management objectives for a RNA. Additional evaluation on the size and location of a potential RNA is relation to the future transportation needs is needed. The hot springs is also being evaluated for designation as a Special Area Land Use Designation. (Chatham Area Alternative Development Meeting Notes 1 February 1991; RNA Steering Committee letter dated 31 October 1991).

6. Swan Cove

Map # 77
Admiralty Island National Monument
24,408 acres

Swan Cove is being proposed as a potential candidate RNA to replace Pack Creek RNA. This proposed RNA would represent old-growth spruce/hemlock forest types in northern Southeast Alaska, and also includes excellent examples of estuary, beach fringe, riparian, subalpine and alpine habitats. This proposed RNA includes productive brown bear, bald eagle, river otter and Sitka black-tailed deer habitats.

7. Chaik Bay

Map # 19
Admiralty Island National Monument
8,314 acres

The significance of high-productivity, low-elevation riparian Sitka spruce habitat for a variety of important game and other wildlife specie, has become more widely understood in recent years. These high-productivity stands have been the focus of commercial timber management in the Tongass National Forest, and obtaining good examples for the RNA network in most of the major different forms they occur in the Forest becomes more difficult with time. Chaik Bay in the Admiralty Island National Monument and Wilderness is a superlative example of riparian spruce typical of the large islands of the Forest. The river entering Chaik Bay flows through a broad, low elevation floodplain that occupies most of the watershed. The riparian spruce stand at Chaik Bay is one of the most extensive areas of the type on the large islands of Southeast Alaska that has not been entered for commercial timber harvest.

The area contains exceptional brown bear habitat and productive fish habitats. Sitka black-tailed deer and bald eagle make intensive use of the low elevation forests. Beaver activity influences the riparian river bottom habitat. Marten and hairy woodpecker could be expected in the area. However, low elevation forests at Chaik Bay are not affected by the set of mammals that are common on the mainland but absent on Admiralty Island; these mammals include lynx, coyote, black bear, gray wolf, mountain goat, snowshoe hare, northern flying squirrel, and northern red-backed vole.

Other forest types include western and mountain hemlock, and low and high elevation muskegs. The Chaik Bay area includes broad and nearly level alpine benches at the north and south end of the watershed. The uncommon Tongass National Forest plants *Mimulus lewisii*, *Veronica stelleri*, and *Castilleja chrymactics* should be searched for in the alpine meadows of the RNA.

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Bailey Bay Hot Springs

Map # 27
Ketchikan Ranger District
2,404 acres

In Southeast Alaska nearly all hot springs have been developed for resorts or public recreation. Modification of the springs for these purposes has resulted in the destruction of specially adapted high temperature organisms and delicate or unique rock formations. Bailey Bay Hot Springs are reported to have been tapped to some unknown degree for a resort before 1940, however, the main vents, pools, and seepage slope are reported to be in nearly pristine condition. Bailey Bay Hot Springs has the highest surface temperature of any hot spring in Southeast Alaska, and represents one of the only opportunities to include a medium to high grade (reservoir temperatures above 150 degrees C) geothermal area in an RNA anywhere in Alaska.

At least 10 major seeps and several minor seeps issue from granitic bedrock on a northwest-facing slope above Spring Creek valley; they drain into Lake Shelokum. Temperatures of the seeps range from 92 degrees C to 71 degrees C. The water at the hottest vent has a pH of 8.9 (alkali).

The freshwater wetland plant *Lycopus uniflorus* has been collected in the RNA, one of only two known collections in Southeast Alaska. The only collection in Alaska of *Campanula scouleri* was made in the area or at a nearby hot spring. The wetland grass *Poa laxiflora* should be searched for in the area; only two collections are known in Alaska.

Current development in the area of the Bailey Bay Hot Springs includes a CCC constructed 3-sided shelter, and a 2.2 mile trail which extends from Bailey Bay past Lake Shelokum and on to the shelter near the springs. The spring itself has not been developed except for placing rocks and plastic sheeting on occasion to create pools. Current use of the hot springs is low due to the poor condition of the trail. The use of Lake Shelokum, which is stocked with eastern brook trout is also low due to the trail condition.

In 1982, private interests proposed developing the spring into a resort. The resulting Environmental Assessment recommended no action and to maintain the status quo. The Ketchikan Area recommends this philosophy be continued with the establishment of a Bailey Bay Hot Springs RNA designed and managed to continue and enhance the recreation use of the area.

The following reports have been compiled by the FS for the Bailey Bay Hot springs area: 1) A Sensitive Plant Survey at the Bailey Bay Hot Springs Lake Shelokum, Southeastern Alaska, by Mary Clay Muller. 2) Geologic Report for Bailey Bay Shelokum Lake Hot Springs Resort Application, by Frederick W. Prange. 3) 1982 Environmental Assessment: Bailey Bay Hot Springs Management, signed 8/13/82 by Forest Supervisor Win Green.

Existing and potential future recreation use of this area would conflict with a RNA. Due to the location and the primitive nature of this area, it would be extremely difficult to implement and enforce regulations prohibiting recreational use of the hot springs. With expected increased use in the area, action may be needed to prevent any further possible adverse impact to the hot springs by users. One option that has been considered is constructing a wooden hot tub that would draw water from one of the hot springs and combine it with the cooler creek water to maintain a reasonable bathing temperature. There are also plans to replace the bridge along the Bailey Bay Trail and upgrade the tread sometime over the next few years. These type of management activities do not appear to be consistent with the direction to manage the area without human intervention, as required for an RNA. The Forest Service recommends that Bailey Bay is better suited as a Special Area Land Use Designation, and this recommendation is being considered in the SDEIS (Ketchikan Area Alternative Development Meeting Notes 13 & 14 February 1991; report from C.Reinhart 21 March 1991).

2. Falls Creek Windthrow

Map # 49
Petersburg Ranger District
821 acres

This even-aged stand of spruce and hemlock in a strip going up a hillside apparently followed a catastrophic windthrow event about 200 years ago. The stand has been used for growth and yield research, and could be a valuable resource for future work on forest-soils interactions. This stand is much more productive than most forests of its age, or with its soils (Karta series), presumably due to the effect of windthrow on disturbing the soil, and, thereby, mixing organic and mineral layers. Comparisons with nearby less disturbed soils could be used for future research. The Falls Creek windthrow is currently used as a demonstration area for illustrating maximum levels of productivity in unmanaged second-growth forests. Because high volume second-growth stands have been utilized heavily in the past, they are relatively rare, and present unique research opportunities. Falls Creek is also easily accessible since it is on the Petersburg road system. This road access also results in relatively high recreation use in the area. The RNA committee felt Falls Creek Windthrow would make a valuable addition to the RNA system, primarily by representing the cell for mature second-growth spruce-hemlock forest.

3. Kadin Island

Map # 22
Wrangell Ranger District
1,523 acres

This area is proposed because of the occurrence of a unique form of high-productivity Sitka spruce/devil's club forest type. High winds moving down the Stikine River canyon pick up silt from the unvegetated glacial river floodplain and deposit it as loess on islands at the river's mouth. The continuing rain of loess onto the upper soil layers provides a supply of unleached, nutrient-rich soil material to the forests of the island. The loess deposition overcomes the process of acid bog formation (paludification) that overtakes most stable sites of moderate topographic relief in the Tongass National Forest. Few areas in the world have a combination of high rainfall and recent loess deposition, so the properties of the soils here are of special interest. Thick loess soils also have a high water-storage capacity, so the hydrology of the island is of interest, too.

The fringe of the island is subject to tidal influence and changes in water level due to shifts of the river. Wetland marsh communities should be included in the RNA if possible. Plant species uncommon to the Tongass National Forest that should be searched for include the following wetland species: *Glyceria leptostachya* (collected near Wrangell), *Eleocharis kamtschatica*, *Nymphaea tetragona*, *Caltha biflora* (observed in Stikine bottomlands near Kakwan point) and *Lysimachia thyrsiflora* (collected in Stikine River marshes).

Kadin Island bald eagle nest concentration is second only to parts of Admiralty Island, according to the U. S. Fish and Wildlife Service (personal communication).

Kadin Island is steep-sided and cone shaped in profile. Results are available from forest stand reconstruction studies during logging on nearby Vank and Rynda Islands. Access to the area is excellent; the city of Wrangell is only about 6 kilometers south of the area.

4. South Etolin Island

Map # 29
Wrangell Ranger District
5,346 acres

South Etolin Island is proposed in order to include an old-growth forest of fire origin, examples of the western hemlock/western red cedar forest type, and communities within the mixed conifer series including mountain hemlock, shore pine, and red- and yellow-cedar muskeg types. Forest fires are exceptionally rare in the Tongass National Forest because of high rainfall and the lack of natural ignition sources. The principal burned area within the proposed area regenerated from a fire that occurred an estimated 300 years ago. Fire scars occur on many trees in the area, indicating that the burning history of the forest

here is probably a complex mosaic. The 300 year-old fire probably escaped from native burning of a western red cedar tree or snags. Snag or tree burning was a technique natives used to hollow out logs prior to carving them with stone tools to make sea canoes. Western red cedar was the basis for the northwest Indian culture and most stands near tidewater were heavily used for items such as woven bark, baskets, house planks, poles, paddles, weirs, and canoe logs. Western red cedar is generally restricted in Southeast Alaska to areas south of Sumner Strait.

Wolves occur on Etolin Island and they range into the area of the potential RNA. Sitka black-tailed deer populations, as judged by their effects on preferred browse species, are relatively low in the area. The area offers the opportunity to investigate possible relationships between wolves and deer. South Etolin was the site of a Roosevelt elk introduction in 1987; future elk introductions are being considered.

The area contains the western hemlock/salal, the mixed conifer/salal, and the mixed conifer/salal/skunk cabbage communities which are restricted to the southern portion of the Tongass National Forest. Upper elevations in the area support the mountain hemlock/Alaska blueberry/cassiope community. Areas of beach and beach fringe communities add habitat diversity to the area.

No systematic plant collections have been made in the area but rare species that should be searched for include *Asplenium trichomanes*, *Glyceria leptostachya*, *Oxycoccus palustris*, *Penstemon serrulatus*, and *Mimulus lewisii*.

OTHER RECOMMENDED POTENTIAL CANDIDATE PROPOSALS

6. Duncan Salt Chuck

Map # 21
Petersburg Ranger District
3,478 acres

A salt chuck is a brackish lagoon usually constricted by a reversing waterfall. Fresh water from a stream or river spills over a rock shelf or obstruction during low tide stages, but during flood tide saltwater or brackish water cascades over the obstruction in the opposite direction. This unusual geological feature is found only along seacoasts with large tidal fluctuations and shorelines that are dynamic and relatively youthful so that they are not yet buried by sediments. Southeast Alaska experiences large tidal amplitudes and is dynamic because of tectonic uplift and subsidence and isostatic rebound.

Duncan Salt Chuck is one of the largest and best known salt chucks in the Tongass National Forest and is set in the Petersburg Creek-Duncan Salt Chuck Wilderness Area. The RNA proposal is designed to include shoreline and

associated upland ecosystems surrounding the restricted-circulation bay or salt lagoon in which the reversing falls occurs. Cooperation with the State of Alaska will allow the inclusion of key features below mean higher high tide in a state tidelands reserve.

Extensive muskeg and wetland communities line the level uplifted marine terrace that makes up much of the shoreline of the area. These communities are highly productive for waterfowl and shorebirds, in addition, the proposed RNA is an important spring black bear feeding area, contains many bald eagle nests, and is important fish-rearing habitat. The area also contains two public recreation cabins and receives "heavy" recreation use. Little detailed inventory information is available on the plants of the area. Uncommon plant species of the Tongass National Forest that should be searched for in the area include *Scheuchzeria palustris*, *Eleocharis kamtschatica*, *Calypso bulbosa*, and *Nymphaea tetragona*.

7. West Duncan Uplift

Map # 48
Petersburg Ranger District
6,495 acres

West Duncan Uplift contains special landforms that illustrate the development of a post-glacial landscape of the major islands of the Tongass National Forest. During the time of deglaciation at the end of the Wisconsinian glacial period (12,000 to 14,000 years ago) because of the depression of the land surface by the weight of glacial ice, what is now Kuprenof Island was a series of rocky islands. As the Wisconsinian glaciers melted, vast quantities of glacial sediment were deposited among the rocky islands now comprising the mountain peaks of Kuprenof Island. Once the weight of glacial ice was removed the compressed earth crust expanded and the land surface rose by a process known as isostatic rebound. The area is made up entirely of level uplifted marine deposits.

The glacio-marine deposits within the area are predominantly silt with sand lenses and clays. Fossils of modern marine shellfish such as cockels and pearly mussels are present. The terrace has been above sea level for about 7,000 or 8,000 years. During that time a stream system incised its meandering path down through the sediment. In the incised stream system there are several features of river morphology including paired terraces, meander scars, and abandoned channels. The streams have little further erosive power because the downcutting channels have reached bedrock obstructions.

The level, low-elevation plains of the area are one of the most extensive wetlands and muskeg surfaces in the Tongass National Forest. Tidal mudflats are important for migrating shorebirds. There is one recreation cabin, and Indian Point is an inventoried site of high potential for developed recreation; present recreation users include waterfowl hunters. The area contains mining claims which will need evaluation in identifying final recommendations and final boundaries.

Little information about vegetation types and plant species is available for the area.

8. McDonald Lake

Map # 75
Ketchikan Ranger District
10,788 acres

This area would target study of riparian spruce and other upland forested and non-forested habitats. The McDonald Lake area contains sites from near sea level to 3,500 feet (alpine). A full range of volume class stands (hemlock, spruce, and hemlock/spruce) are present. Hydrologic features are diverse.

All five species of salmon are present, plus steelhead, and dolly varden. McDonald Lake has historically supported one of the largest sockeye runs in Southeast Alaska. Recent fisheries enhancement to restore that run has been accomplished by fertilization of the lake (a seven-year project scheduled to end in 1989). Additional fish enhancements are being considered for the inlet. Because of the enhancement work, the area is not suitable as an RNA for fish, and the proposed boundary excludes the lake and other areas which have been altered.

An abandoned fish hatchery is located at the Walker Creek inlet to the lake. Second-growth timber stands (about 40 years old) which occurred after logging are near the fish hatchery. Yes Bay, at the outlet of the lake, has a resort and heavy recreation use; the upper end of the lake and the riparian stands, in particular, are off the beaten path. Little conflict with recreation use is anticipated. The boundary proposed for the McDonald Lake RNA excludes the abandoned fish hatchery, second growth, and heavy recreation areas.

Mountain goat, brown bear and wolves also inhabit the area.

9. Port Camden Fossil

Map # 60
Petersburg Ranger District
7,920 acres

Port Camden is a well-known fossil tree and plant locality. Exposures of individual plant remains and numerous logs of early Tertiary species occur in bluffs on either side of the bay. The fossils are estimated to be over 40 million years old. Fossil stumps and logs are present as both silicified and carbonaceous remains. Tuffaceous beds (volcanic ash) that contain carbonized imprints of plants are also present. The best fossil exposures are along the shore where marine erosion removes material in the bluff and concentrates remains in the intertidal zone. Recent road construction in the vicinity carved another exposure through the fossil-bearing layer. Further excavation or accelerated erosion on the uplands may damage paleontological resources.

Several warm temperate forest species have been identified among the fossils, including bald cypress (*Taxodium dubium*), redwood (*Sequoia langsdorfii*), chestnut (*Castanea castaneaefolia*), hazelnut (*Corylus maquarii*), planetree (*Planera ungerii*), and the fern *Osmunda doroschkiana*.

This area contains mining claims. These mining claims will need to be an evaluation factor in considering final recommendations for this proposed RNA. Also, the RNA Steering Committee recognizes the need for additional inventory work in this area to obtain better knowledge of where the fossil resources are located. The fossil resources are likely better suited for the Special Area management prescription rather than an RNA.

SOUTHERN OUTER ISLANDS GEOGRAPHIC PROVINCE

PRIORITY POTENTIAL CANDIDATE PROPOSALS

1. Klakas Lake

Map # 41
Craig Ranger District
7,162 acres

Field work during the summer of 1990 by the RNA Steering Committee indicated that this RNA proposal should be a "priority" proposal rather than the previous recommendation of "other recommended" (RNA Steering Committee letter dated 31 October 1990). The Klakas Lake area is proposed for RNA status to assure a quality riparian spruce study area in each of the three provinces on the Ketchikan Area. The area would encompass the entire lake (a low elevation warm water lake), its inlet (with a species rich wetland meadow) and outlet (with a small estuary located at its outlet). Sockeye salmon are present in the lake; pink and chum salmon are present in its outlet. Riparian spruce forests are present, developed on both colluvial and alluvial materials (spruce/salmonberry plant associations); the inlet contains a wide active flood channel with riparian spruce. Photo interpretation indicates this area would provide a better riparian spruce forest feature than that available at Johnson Lake. Low to high volume hemlock stands are present; cedar may be present in some stands.

2. Rio Roberts

Map #
Thorne Bay Ranger District
Acres

This is a new site looked at this summer, with the idea that it would replace the previous Johnson Lake RNA proposal. This area contains riparian flood plain spruce stands (spruce/devils club plant associations), upland old growth and natural second growth stands, and upland hemlock on drumlin fields (glacial

feature). Note that the riparian spruce stands in this RNA proposal include different plant associations than in the Klakas Lake RNA proposal, hence the recommendation to have both RNA proposals. (RNA Steering Committee letter dated 31 October 1990).

3. Mount Calder-Virginia Mountain

Map # 25
Thorne Bay Ranger District
5,131 acres

Mount Calder-Virginia Mountain contains the only known coastal population of subalpine fir, several uncommon plant species that suggest its role as a glacial refugium, and typical southern Tongass National Forest forest communities on Prince of Wales Island. The area has a history of alpine research and will be of continuing value for additional comparative studies.

Several plants noted in the area are reported in Southeast Alaska for the first time. These species are *Androsace chamaejasme*, *Arctostaphylos alpina*, *Arnica diversifolia*, *Draba lactea*, *Draba lonchocarpa*, *Senecio lugens*, and *Woodsia glabella*. A plant identified as *Antennaria umbrinella* is reported from the area, which would be an addition to the flora of the state. However, it is known to intergrade with *A. rosea* (common in northern Alaska but only one collection in Southeast Alaska). Several plants reported on Mount Calder-Virginia Mountain are significant southward range extensions over previously known distributions in Alaska. These species include *Anemone parviflora*, *Cerastium beeringianum*, *Dryas drummondii*, *Erigeron humilis*, *Oxytropis campestris*, *Poa alpina*, *Poa arctica*, *Salix reticulata*, *Saxifraga oppositifolia*, *Silene acaulis*, *Thalictrum alpinum*, and *Tofieldia coccinea*. Most of these species are characteristic of arctic and subarctic alpine sites in interior Alaska and the high elevations of northernmost Southeast Alaska. Collectively they suggest the area may have been a glacial refugium with remnants of an ice age flora characteristic of a climate colder than that of contemporary Prince of Wales Island. Additional taxonomic work on the flora of the area is needed, with specimens deposited in Alaska herbaria.

The subalpine fir community is made up of relatively small trees in a stand that extends to treeline and includes several wind-trained, prostrate or krumholz-form trees. The stand is located on the summit and northeast-facing slopes of the Virginia Mountain ridge system down to an elevation of about 300 meters (1000 ft). The summit of Virginia Mountain and the north-facing slope of Mount Calder contain well-formed cirque basins. The south-facing slope of Mount Calder rises directly up from tidewater and contains enough rough broken ground on the summit that it may have been a nunatak during much of the Wisconsinian glacial period.

Important forest types in the area are mountain hemlock, Alaska yellow-cedar, and western hemlock series. Limestone bedrock underlies some of the area, and karst features should be looked for in the area.

The Mount Calder-Virginia Mountain area is an important part of the Primary Sale Area for the KPC long-term timber sale and has been partially roaded and logged. It contains several approved units for the 1989-1994 operating period. These management activities are not compatible with the RNA proposal.

The Tongass Timber Reform Act designates a portion of this area as a legislated LUD II. As a result of the Act, the Forest Service recommended that the original proposed boundaries be redrawn to reduce resource conflicts and fit with the legislated LUD II area. However, the primary emphasis in proposing this area as a research natural area is to capture the coastal population of subalpine fir, and the redrawn boundaries did not capture the subalpine fir.

The District Ranger at Thorne Bay has recommended that Calder Mountain be designated a Special Interest Area for the Tongass Forest Plan Revision (letter dated February 19, 1991). The boundaries for this Special Interest Area avoid the resource conflicts noted above, but capture and provides protection for some of the resource features originally sought after with the RNA proposal.

4. Sarkar Lakes

Map # 28
Thorne Bay Ranger District
8,682 acres

Sarkar Lakes is proposed because its watershed system supports a significant run of sockeye salmon. Sockeye runs are known from only about 60 of the 3,000 streams in Southeast Alaska that support anadromous fisheries. The availability of lake habitat for a juvenile rearing stage is an important factor in high-productivity sockeye fisheries. The sockeye run at Sarkar Lakes is important for commercial and sport harvest and is monitored at a weir by the Alaska Department of Fish and Game for the US-Canada salmon treaty. The Sarkar Lakes system has high population of coho salmon, cutthroat, and dolly varden. Pink salmon also occur here.

The watershed of Sarkar Lakes is on limestone bedrock that contributes to the high productivity of the aquatic ecosystem, especially high densities of juvenile salmon. Unlike the many valley moraine lakes in the mountains of Southeast Alaska, these lakes are representative of low-elevation gently rolling glaciated terrain. Warmer water temperatures in this low elevation watershed may also contribute to high aquatic productivity. Studies at Sarkar Lakes have shown that juvenile sockeye grow faster, get bigger, and go to sea earlier than in many other lakes and streams where they occur in Southeast Alaska.

This area is an overwintering area for the trumpeter swan, and has even-aged stands.

The Sarkar Lakes area is the only LUD II area within the roaded portion of Prince of Wales Island and includes ROS classes which range from Semi-Primitive motorized to Primitive II. Sarkar has historically been a high use recreation area and may be accessed by road and boat, float plane or walk-in. Presently, both developed and dispersed recreation use is occurring. Developed recreation includes a parking area, boat ramp and Forest Service recreational cabin. Many recreationists use the developed sites for fishing, hunting, trapping, hiking, canoeing, kayaking, skiffing, sight seeing, wildlife viewing, access to salt water and solitude. In addition, Sarkar contains significant cultural resource sites, some of which are nominated for inclusion to the National Register of Historic Places. Subsistence use of sockeye salmon is also very popular and prevalent within the area; over 60 dip net permits occurred in 1990.

According to the 1990 Database report for yearly cabin usage, Sarkar Lake Cabin received 526 visitor days and 263 person days. This use figure puts Sarkar Lake Cabin in priority position number seven, out of 14 Thorne Bay cabins. These figures reflect a relatively high use at Sarkar Lake cabin as compared with the entire Ketchikan Area. Exact visitor days as associated with dispersed recreation activities and other developed sites at Sarkar are unknown as no counters or other means of tracking have been used. Visitor use during peak summer months is high as witnessed by the number of cars observed in the Sarkar Lake parking area which is rarely empty.

A Sarkar Lakes Canoe Route was submitted as a two phase Capital Investment Project. Phase I consists of survey and design work which will be completed in FY 91, while Phase II consists primarily of boardwalk construction of a 16-mile trail and construction of four toilets and three tent platforms. The Canoe Route is intended to provide recreationists a unique canoe opportunity via a series of six boardwalk portages. The decision to develop Sarkar Canoe Route has been coordinated with the 1989-1994 LTS/EIS.

Several Outfitter/Guide applicants have requested permits for use in Sarkar. Some Outfitter/Guide use already exists.

Due to the existing and future recreation and subsistence uses in the Sarkar Lake area which are incompatible with RNA designation, Sarkar Lakes is not being considered for RNA status (Ketchikan Area Alternative Development Meeting of 13 & 14 February 1991; Sarkar Lake Recreation Report dated March 7, 1991).

5. Thunder Mountain

Map # 39
Craig Ranger District
5,189 acres

Thunder Mountain area is proposed to include a possible glacial refugium, alpine plants uncommon in the Tongass National Forest, outer coastal forest types of the southern Tongass National Forest, potential habitat for the marbled murrelet, a karst landform, even-aged 150-200 year old productive stands on limestone, a sockeye stream and lake, very diverse wildlife, and possibly subalpine fir.

Three plant species collected at about the 950 m (3110 ft) elevation on Thunder Mountain represent significant range extensions, *Salix reticulata*, *Thalictrum alpinum*, and *Tofieldia pulsilla*. The subalpine meadow plant community types found on Thunder Mountain are markedly different than the common types of southern Southeast Alaska. The soil parent material over much of the area is marble, which is often associated with noteworthy plant communities, rare or uncommon plant occurrences, and high-productivity forest types.

Thunder Mountain rises directly from the outer coast of the open North Pacific, and has no high elevation snow-gathering areas behind it toward the mainland. The topography of the mountain is very steep, rough, and broken, not rounded and polished as much of mountainous Southeast Alaska is. The location and physiography of the area suggest that it may have been an ice-free nunatak during at least portions of the Wisconsinian glacial period.

Thunder Mountain appears to contain suitable nesting habitat for the marbled murrelet. The marbled murrelet is a seabird which feeds on the open ocean and nests in old-growth forest trees. The Threatened, Endangered and Sensitive Species section of the AMS contains more information on the marbled murrelet.

Manhatten Lake is included within the proposed area. This lake system which has contains a natural run of sockeye salmon and has been untouched by habitat manipulation or enhancement. Maintaining the lake and streams in a natural state to provide baseline information for comparison with the numerous other lakes and streams which have been manipulated or enhanced is a very high priority.

This potential RNA is bordered by Native Corporation land on the south and east. The State proposes selection of community sites across Hook Arm from the proposed RNA. Rough seas could present access problems; access across Native lands through a cooperative agreement may be a possibility. The area is subject to rapid changes in weather as storms from the open North Pacific Ocean quickly develop and move onshore.

The Forest Service believes that this area is better suited for a Special Interest Area designation instead of an RNA.

6. El Capitan

This site is suggested to replace the previous Disappearance Creek RNA proposal. It contains all of the limestone/karst features which were being sought after for the RNA (sink hole, deep solution caverns, old growth associated with limestone, unique plant species and associations associated with limestone soils, emergent cold springs, etc. It contains the deepest sink hole measured in North America. (RNA Steering Committee letter dated 31 October 1990).

The Forest Service believes the El Capitan area is better suited to be designated a geologic Special Interest Area, with incorporation of the provisions of the Cave Protection Act.

OTHER RECOMMENDED POTENTIAL CANDIDATE PROPOSALS

7. Hunter Bay - Biscuit Lagoon

Map # 76
Craig Ranger District
5,243 acres

This area contains a freshwater lake and brackish lagoon environments, similar to Salmon Bay. Western hemlock, Sitka spruce, mixed hemlock/spruce, and western red cedar forest types are present; even-aged second-growth conifer stands occur in the area as the result of blowdown and landslides.

This area contains habitats for a variety of wildlife species, including: bald eagles, Sitka black-tailed deer, marten, gray wolf, black bear, numerous waterfowl species, river otter, spruce grouse, Prince of Wales flying squirrel, and Prince of Wales ermine. There is a good possibility that trumpeter swans may over-winter in this area, but this has not been documented. Sockeye, pink and chum salmon are present in the area. According to the Natives in the area there is good fishing.

8. South Sumez-Angel Falls

(Not on map: boundaries have not been delineated.)
Craig Ranger District

More information is needed before this area can be proposed as an RNA. There is a possible rare lily present near Angel Falls; field searches by qualified botanists would be required to verify its presence. Recent volcanics provides a possible unique geologic feature. There may be opportunity to encompass a full range of forest types from riparian spruce to productive upland forest to muskeg.

9. Disappearance Creek

Map # 38
Craig Ranger District
741 acres

Disappearance Creek watershed is a steep north-south drainage. One entire side of the drainage is a landslide which buried the stream, and this side of the drainage currently has no trees. The lowermost segment of the valley is reported to contain an above-ground, spring-fed stream with high fisheries productivity. This area was originally proposed to represent plant associations and stream characteristics associated with typical limestone or karst regions of the Forest. The drainage does not contain the limestone/karst features which were sought after for this RNA proposal (RNA Steering Committee letter dated 31 October 1990).

10. Johnson Lake

Map # 42
Craig Ranger District
2,641 acres

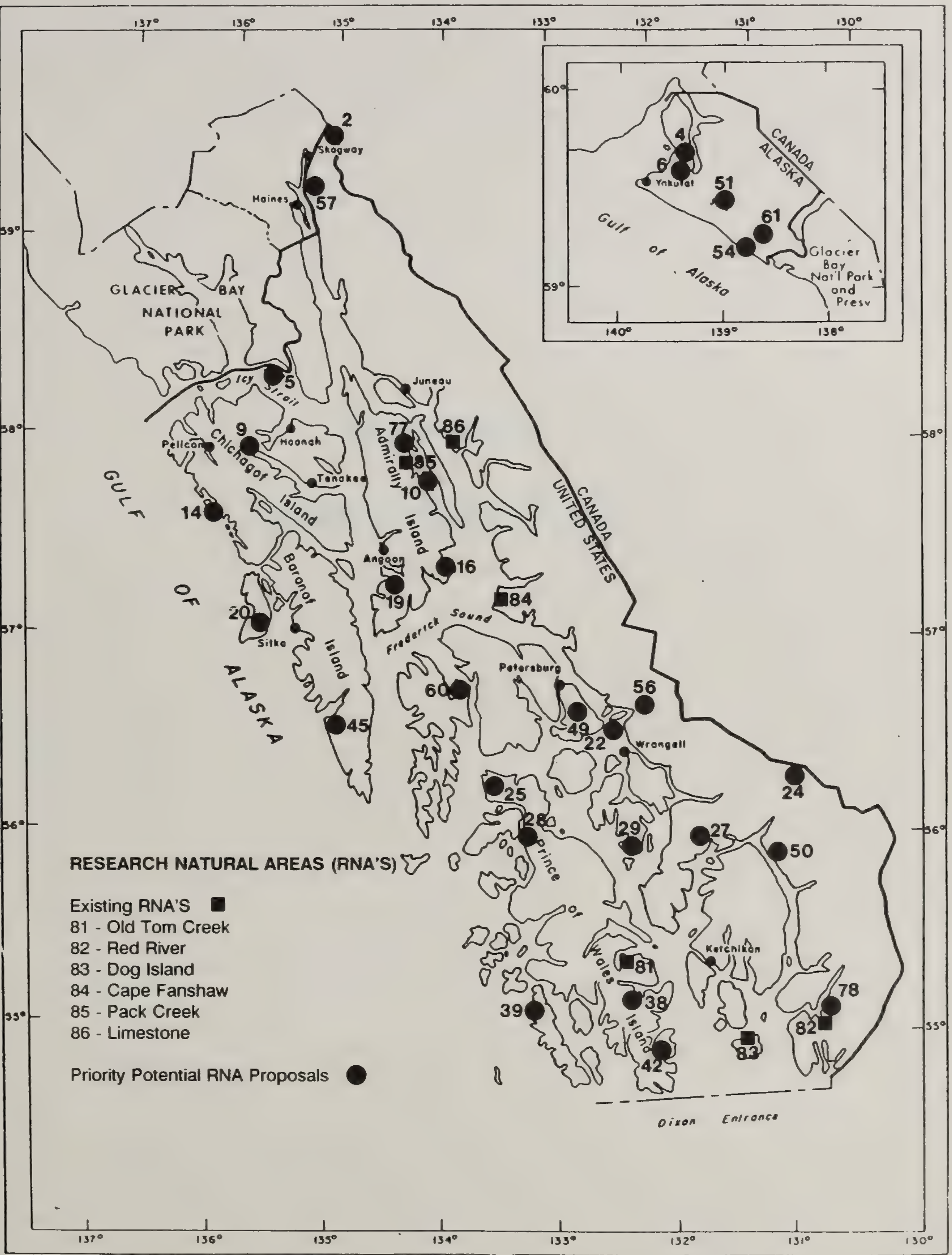
Johnson Lake RNA contains a good, but small, riparian spruce stand, high fisheries values, at least two plants uncommon to the southerly portion of the Tongass National Forest, and good examples of typical southern Southeast Alaska forest types. Floodplain Sitka spruce in the RNA are very large, reaching diameters of 280 cm (110 inches); most dominant trees are 64 to 67 meters (210 to 220 feet) tall, making the stand where the trees are located one of the most superlative remaining spruce stands in Southeast Alaska.

Physocarpus capitatus is reported along freshwater stream margins in the area. *Spiraea douglasii* is reported along the lake shore. As the southernmost of the new RNA proposals for the Tongass National Forest, Johnson Lake RNA has the potential to contain several range-limited plants and animals. Some of the most significant potential plants are *Asplenium trichomanes*, *Poa laxiflora*, *Juncus nodosus*, *Platanthera gracilis*, *Viola sempervirens*, *Monotropa uniflora*, and *Stachys emersonii*.

This area is critical to the overall transportation system coordinated with the State in their Prince of Wales Area Plan, to serve several bays in the Moria Sound to Ingraham Cove area (RNA Steering Committee letter dated 31 October 1990).

EXISTING AND PROPOSED RESEARCH NATURAL AREAS

Note: The previous descriptions include the map number for each area.



Appendix F

Special Interest Areas

APPENDIX F

SPECIAL INTEREST AREAS

This appendix provides a description of each of the 14 potential Special Interest Areas. Their general location is shown on the map at the end of the appendix, with map numbers indicated in the description for each area.

PIKE LAKES

Map #1
Approximate size: 1,640 acres
Proposed Classification: Recreational Area

Pike Lakes is located in the Yakutat Forelands. A lack of recent glacial disturbance has allowed the Pike Lakes area to evolve into the muskeg type common to most of Southeast Alaska, but unusual in the Yakutat area. It has unique and disjunct fauna and flora compared to surrounding areas. Stands of lodgepole pine, Western hemlock, Sitka spruce and mountain hemlock represent a later successional stage than the Sitka spruce, black cottonwood and alder of other portions of the Yakutat Forelands.

Anglers willing to take a short hike to access the area can fish for species other than the locally plentiful salmonids. Five of the lakes in the area are inhabited by northern pike (*Esox lucius*), the only know place in Southeast Alaska where this species is known to occur. The closest locations of northern pike are in Canada and north of the Alaska Range.

The area offers unique recreational opportunities, geologic and ecological features.

FISH CREEK HOT SPRINGS

Map #2
Approximate size: 100 acres

Fish Creek drainage on Baranof Island contains a hot springs and a recreational trail. A comprehensive scoping project for the Sitka Ranger District was completed in 1991. It identified Fish Creek as a high priority for recreational development. Fish Creek is approximately 35 miles from Sitka. It is a popular location for hunting. Deer as well as goat are accessible from the drainage. Habitat improvements such as goose nesting structures, coho rearing pools, and thinnings to improve large woody debris provide opportunity for the public to view multiple resource management. The drainage was logged in the 1960's and logging roads provide potential OHV access. The hot springs are located in an area untouched by harvest. Future plans include enhancement of the hot springs for recreational use, an overnight shelter, and a recreation cabin.

MOUNT EDGECUMBE

Map #3
Approximate size: 41,540 acres
Proposed Classification: Geological Area

The Mount Edgecumbe area, on the southern half of Kruzof Island, offers unique recreational opportunities for residents and visitors to southeast Alaska. There are spectacular volcanic formations on the island. The entire southern half of Kruzof provides a look into the area's unique geologic history. The profiles of Mt. Edgecumbe and Crater Ridge are smooth and symmetrical, evidence that they were not carved by glaciation and thus have erupted since the end of the last Ice Age 14,000 years ago. Radiocarbon dates indicate that the various volcanic layers were erupted over a time period lasting a few hundred to 2,000 years, just prior to 9,000 years ago. A relatively thin ash layer was laid down in one or two later and final eruptions about 5,000 years ago. Buried trees and soil indicate that forest vegetation was well developed on the volcano before the final eruption. The south Kruzof volcanic field contains tholeiitic basalt and younger calcalkalic flows and pyroclastic rocks. The volcanic activity on Kruzof is of particular interest as it is related to plate movements and the complex process of terrain accretion which occurred during the late Cretaceous and early Tertiary time, and subsequent crustal movements.

South Kruzof Island is a popular place for recreationists. There are three recreational cabins located within the proposed area, all of which are heavily used. Mt. Edgecumbe Trail, a National Recreation Trail, is a popular hike for residents and visitors to Sitka. This trail winds to the summit of Mt. Edgecumbe giving hikers the opportunity to explore it's geology. Many of the beaches of south Kruzof are easy to hike and show visitors what happens when a volcano meets the ocean. Iris Meadows offers ample opportunity to see wildlife and to study estuarine vegetation. A trail usable by ATV's comes within a mile of a recreation cabin and Shelikof Beach. Another area of interest to recreationists is Shoals Point where World War II ruins are still evident today.

CLEAR RIVER

Map #4
Approximate size: 11,970 acres
Proposed Classification: Zoological Area

Much of Clear River on Baranof Island lies below 200 feet elevation and contains spruce and hemlock habitat along with shrub riparian habitat. Black cottonwood/willow plant communities also occur in the lower riparian areas: these are unique to Baranof and other Chatham Area islands. Higher up in the watershed occur alpine and sub-alpine plant communities, several small cirque (hanging) alpine lakes, and several small glaciers. Clear River has substantial runs of pink, chum and cho salmon, and Dolly Varden char, plus a resident Dolly Varden char and cutthroat trout population. The higher elevations have potential as mountain goat habitat.

The area offers one of the most unique estuary environments in the Outer Islands geographic province. Clear River (non-glacial) and Glacier River (glacial) converge into the same grassflat/intertidal zone, creating habitat for a diverse number of birds, fish and plants, and supports high densities of brown bear and land otter.

PATTERSON GLACIER

Map #5
Approximate size: 7,400 acres
Proposed Classification: Geological and Botanical Area

The Patterson Glacier is an active glacier located on the mainland northeast of Petersburg. There are a variety of outstanding features present in the area, some of which are:

- An historic lake created by the advancing glacier cutting off a drainage. The lake has since drained but could be created again with advance of the glacier.
- A remnent forest below the glacier face showing signs of being apparently buried and over-ridden by the glacier, then later having the stumps re-exposed.
- Outstanding examples of plant succession after glaciation, from bare scoured rock to old-growth (climax) forest within a very short horizontal distance.
- Excellent opportunities for study of natural phenomena.
- A small population of mountain goats lives in the area and moose are sometimes found in part of the area.

The area has good recreation opportunities for hunting, climbing, hiking, and photography. It is accessed by walking part way from salt water on old logging roads but no trail exists for the remainder of the distance. Sometimes access is achieved by skiff up the river and by floatplane.

KEKU ISLETS

Map #8
Approximate size: 1,060 acres
Proposed Classification: Geological and Scenic Area

The Keku Islets are located on the northeast shore of Kuiu Island. The many islands in this area, although exposed to the ocean environment, provide safe anchorage for small boats. Within the area there are numerous cultural sites and a rich history which includes Native use and fox farming. There are numerous and unusual limestone formations, including small caves, arches, stocks, and cliffs, as well as plant and animal fossils. There are also interesting and unusual vegetative forms and patterns.

The area is currently being considered for Native selection but transfer of ownership is questionable. The area has good recreation potential with access by small boat for beachcombing, photography and fossil collecting. Potential conflicts may develop from disruption of cultural sites.

BLIND SLOUGH

Map #6
Approximate size: 8,530 acres
Proposed Classification: Scenic and Zoological Area

Blind Slough is located on Mitkof Island. The area is accessible by a 20-minute drive from the community of Petersburg and has long been a local favorite. Key features that make it special include: outstanding bird habitat, significant returns of king and coho salmon, alpine features of Crystal Mountain, and the interpretive opportunities these natural features provide.

Blind Slough is a unique ecosystem in Southeast Alaska, having alpine, estuary, wetland and marsh-type habitats. This unique combination of features provides for a diverse population of birds and outstanding avian habitat. In bird surveys conducted in 1990, 102 species were recorded with seven species rare to Alaska and seven species rare to Southeast Alaska.

Blind Slough is widely known as one of the northernmost wintering areas for the Trumpeter Swan (designated a sensitive species) and is an important wintering area for the swans due to its relatively ice-free state. Water from Blind River and runoff from Crystal Mountain feeds into the slough making it mainly a fresh water system with some tidal influence. During freeze up, the tides tend to break the ice and keep the area relatively ice-free, except in times of prolonged extreme cold. Trumpeter Swans feed almost exclusively upon the roots of the freshwater ditch grass, sedge, and the saltwater eel grass of the slough which is available to them due to the relative ice-free state of the slough.

Another important feature of the Blind Slough area is the outstanding beauty enjoyed by the recreating public at one of the several developed recreation sites. The area contains the Ohmer Creek Campground, the new barrier-free Ohmer Creek Trail, the Blind Slough Picnic Area, the Swan Observatory, the Blind Rapids Trail, the Manmade Hole recreation site, and several other day use sites and trails.

Crystal Mountain (elevation 3317') provides the scenic backdrop for most the activities pursued in this special area. Its overall presence and dominance, snow capped peaks, alpine vegetation, and lower elevation forest, when combined with the slough's estuarine habitat form a diverse array of scenery, presenting the viewer with an outstanding landscape.

These zoological and scenic resources combine to offer a unique opportunity for public interpretation of natural history. During the summer of 1990, commercial bus tour visitors were given nature walks by Forest Service Interpreters. It is anticipated that the opportunities for public interpretation will grow substantially in the future as the tourism industry continues to expand in Petersburg.

NORTH HAMILTON RIVER RED CEDAR

Map #7
Approximate size: 80 acres
Proposed Classification: Cultural and Botanical Area

The North Hamilton River red cedar area is located on Kupreanof Island. It is an 80-acre stand of timber with a high component of red cedar. North Kupreanof is the furthest north where red cedar is present. It occurs only along the western side of Kupreanof Island as a minor component of the forest with a scattered distribution. This stand is unique because of the high proportion of red cedar it contains, which is unusual at this latitude.

The stand was identified as being significant for subsistence and cultural uses by the native wood carvers of Kake in 1974, and the Hamilton River Timber Sale was modified to exclude the red cedar area from the sale. A high priority of the citizens of Kake is to set aside the red cedar grove for cultural and subsistence uses. This is the only red cedar in the immediate area that is easily accessible.

The traditional uses of red cedar include carving, medicines, sewing materials and construction materials.

The red cedar area and the adjacent second growth forest resulting from the harvest of the Hamilton River Timber Sale have unique ecological characteristics which are distinct from the surrounding area.

ARENA COVE/ CAPE FELIX

Map #10
Approximate size: 9,260 acres
Proposed Classification: Geological Area

Arena Cove and Cape Felix are on Suemez Island facing open ocean to the Southeast. Of particular geologic and cultural significance are the Cenozoic volcanic rocks on this portion of the island. Included is a unit of basaltic, rhyolitic and andesitic lava with local obsidian flows and minor proportions of interbedded breccia, tuff, and agglomerate. The northern end of this volcanic unit dominates the landscape in the form of a plateau which overlooks Port Refugio. On the southwestern end, the volcanic formation rises to include the highest point on the island (a possible volcanic vent at 2,145 feet elevation), and descends dramatically seaward, in the form of cliffs and scree slopes, where it terminates at Cape Felix.

Indications of the early prehistoric use of Suemez island are supported by indirect evidence. Two sites in southeast Alaska which date to the earliest known time period, the Paleomarine (ca. 10,000 B.P. - 6,500 B.P.), have contained obsidian artifacts which probably originate from the volcanic formation mentioned above. The sites, 42 and 140 miles away, respectively, imply an extensive raw material trade network which may have been in place on the northern northwest coast 9,500 years ago.

Three cultural resource sites in this area are registered with the Alaska Heritage Resources Survey . It is the opinion of the Area geologist that the Cape Felix samples are from a secondary source, and that there is a high probability of locating a primary source somewhere within the Cenozoic volcanic formation inland.

The dramatic basalt columns and high energy rock coastline of Cape Felix and the fine sand beaches in Arena Cove make this an outstanding scenic area. The proposed Special Area also includes a waterfall that drops dramatically from the volcanic plateau. Arena Cove and Cape Felix have a Visual Sensitivity Level I and a Variety Class A. The inventoried Visual Quality Objective (VQO) is Retention.

The "Meares Passage - Arena Cove Area" was designated an Area Meriting Special Attention (AMSA) in the Hydaburg Coastal Management Program. The basis for this designation is the importance of the area for traditional and customary subsistence and the unique scenic and recreation qualities of the area. Households in Hydaburg harvest seaweed, abalone, deer, mink, land otter, gumboots, and bird eggs from this area. Arena Cove is one of the top four areas used for recreation by the residents of Hydaburg. It is also used heavily for recreation by residents of Craig and Klawock, and visitors to the island.

BAILEY BAY HOT SPRINGS

Map #12
Approximate size: 1,680 acres
Proposed Classification: Recreational Area

The Shelokum Lake/Spring Creek/Bailey Bay area is exceptionally scenic. The Bailey Bay trail was described in one report on file as "perhaps the most scenic trail on the Ketchikan Ranger District." The topography of the area is rugged and complex. Spectacular waterfalls grace the creek that drains into Lake Shelokum from Lake Maude and the outlet creek from the lake. The Spring Creek drainage contains diverse rock faces, numerous avalanche paths, and a variety of water and vegetative features along the valley floor. Grassy meadows with abundant wildflowers occur along the shore of Lake Shelokum near the hot springs.

The primary recreational use in the area is dispersed recreation. There are no "developed" recreation sites in the area. There are several recreational facilities in the area, including a three-sided shelter, a hiking trail and a marine mooring buoy. The area is designated as primitive ROS class. The types of recreational use include hiking, camping at the shelter, wildlife viewing, fishing (saltwater and freshwater), hunting (deer and mountain goat, possibly bear), exploring the hot springs and unique algal growths, and bathing in the hot springs.

Access to the area is provided either by floatplane or by boat. Access from saltwater to the lake is provided by the Bailey Bay trail. A mooring buoy is maintained by the Forest Service in Bailey Bay.

BLUE RIVER LAVA FLOW

Map #13
Approximate size: 9,500 acres
Proposed Classification: Geological Area

This area is located along the US-Canadian border on the Blue River, a tributary of the Unuk River, in the northwestern corner of Misty Fiords National Monument. The proposed Special Area includes the Blue Lake Lava Flow, Blue Lake, the Unuk River Drainage where the lava has displaced the river, and a 1/4 mile buffer around these features.

There is evidence of three to four periods of volcanic activity within the valley. At least three separate lava flows are visible. A radio carbon sample of a log at the surface of one of the older lava flows was dated at 360 plus or minus 60 years. A cinder cone and associated lava flow is visible approximately halfway between the Unuk and the US-Canadian border. The cinder cone and associated lava flow are heavily timbered. Surfaces of most of the flows are fresh, unaltered rock, largely devoid of any soil cover. Plant growth, other than lichen, on these flows is very sparse. The older lava which displaced the Unuk River, confining it to a narrow channel, referred to as First Canyon, is heavily timbered. The Unuk River has now carved a channel along the contact of the most recent lava flow and granitic rocks which comprise the steep valley walls.

The lava flows contain smooth, ropy "pahoehoe" surfaces and blocky "ah-ah" deposits. Isolated "islands" of forest surrounded by recent lava, called steptoes, are present. Lava contraction (from cooling) features such as drainage gutters and circular pits occur in the area. The surface of the most recent flows are littered with the remains of fallen trees. These trees fell on the still-molten flow

surface, and either left their impact mark or were surrounded by the flow. Visible in the lava are the molds of the stumps of these trees and logs themselves. There is evidence of surface lava tubes and collapsed tubes within the flows. The area should be searched for lava tube caves.

The proposed Special Area has high biological, geological, and hydrological values. Nowhere else in Southeast Alaska does such a geologically young lava flow exist. The unweathered features of this area can shed much information on the recent geologic history of the region. Opportunities exist for studies on weathering of lava surfaces and plant succession rates in the area. There is a high probability that significant cave resources exist in the lava tubes on and within the flows. Though the area is remote and access is limited, recreational opportunities do exist.

KARST AREAS

Map #9
Approximate size: 13,100 acres
Proposed Classification: Geological Area

Karst is a type of topography that is formed on bedrock prone to dissolution. These areas are characterized by sinkholes, caves, collapsed channels, and well-developed, sub-surface drainage. Karsts have developed wherever limestone, marble, or other porous, highly-fractured, carbonate rocks are found on Prince of Wales and Dall Islands. North Prince of Wales Island Karst Areas consist of four units: El Capitan, Perue Peak, North Perue Peak, and Mount Calder. The Dall Island Karst Areas consist of eight units: Bear, Thunder, Squaw, Devil, Windy, Waterfall, Twin, and Rose. It is in the alpine and sub-alpine areas, nominated here as Special Areas, where karst topography is best developed. These areas contain virtually hundreds of solution features per square mile. Fracture patterns, faults, bedding characteristics, and dike interfaces control cave formation.

The Dall Island areas are virtually unexplored and show great promise for discovery of very significant caves. The areas on north Prince of Wales have begun to be surveyed and have already yielded several record features. "El Cap Pit" is the deepest known natural pit in the United States, some 624.9 feet total depth (598.3 feet initial drop). "Snowhole" ranks third in the U.S. at 448.8 feet. El Cap Cave has 10,010.3 feet of surveyed passages and a total depth of 256.3 feet. Northern Prince of Wales Island has the top seven known deepest caves in Alaska and the five longest. Alaska's three largest underground rooms have been recorded with the largest 230 feet long, 85 feet wide, and 116.5 feet high. The caves of the area are truly world class. Stalagmites, stalactites, flowstone, soda straws, drapery, helictites, and crystal formations decorate the cave walls. Air photograph surveys and low level flyovers show these areas to contain virtually hundreds of yet unexplored and uninventoried caves.

The karst topography of the Tongass is unique. Such extensive karst, at such extreme northern latitudes, are not widespread. Karsts form within the uppermost portion of the groundwater zone. It is here that carbonic acid in contact with the limestone dissolves the passages through time. It is possible that glacial ice restricted the movement of groundwater within the limestone outcrops allowing karst formation. This is suggested by the absence of karst

features in the unglaciated top of Mount Calder. The exact conditions under which these features formed has yet to be determined.

The areas identified as potential Special Areas have such a concentration of karst features on them that inventory of the feature and research into their formation and ecology may go on for years. Scientific studies including meteorology, hydrology, evolutionary biology, ecology, mycology, sedimentology, and long-term climatology may be carried out. Paleontological studies of the numerous bones in the caves may shed light on past inhabitants. Organisms living in the cave may be highly specialized resulting in species which live nowhere else.

WARD LAKE EXPANSION

Map #14
Approximate size: 6,500 acres
Proposed Classification: Recreational Area

The existing 440-acre Ward Lake Recreation Area is recommended for expansion to approximately 6,500 acres, which includes all National Forest lands that drain into the Ward Creek/Ward Lake watershed. The Recreation Area was established in 1948, and includes only the immediate area surrounding Ward Lake. The proposed expansion would include the additional existing recreational developments in the area, Last Chance Campground, Ward Creek Trail (Connell Lake to Talbot Lake), and Perseverance Trail and Lake Perseverance. Future recreational opportunities at the lakes, and a number of trail opportunities, will be included within the new boundaries. Current use levels in the Ward Lake Area are estimated at 25,000 recreation visitor days, and use is increasing.

SODA SPRINGS

Map #11
Approximate size: 1,800 acres
Proposed Classification: Geological Area

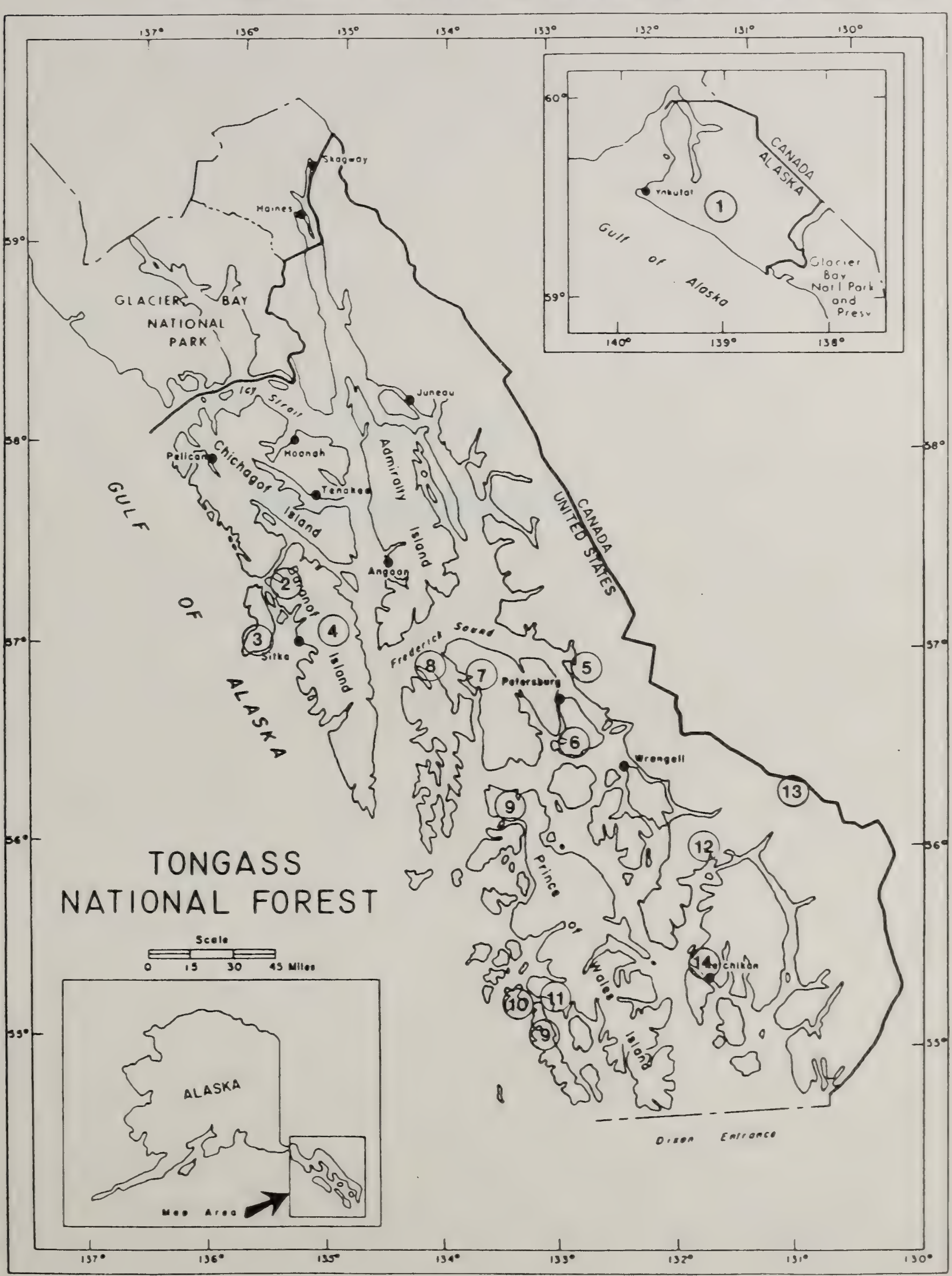
Carbonated springs follow two drainages on the west side of Prince of Wales Island. One drainage empties into the south side of Trocadero Bay, and the other, Soda Creek, flows to the head of Soda Bay. There are a number of springs on both sides of the creek that have built up deposits of tufa, in some places 30 feet or more thick. The tufa is usually a yellow color, but sometimes bright red. The tufa is deposited in several forms. Stratified deposits line the banks of the creek, and mounds in various sizes from several inches to eight feet high have built up in the creek.

Springs also occur around Soda Lake and the creek flowing into the lake. Many of these are small pools bubbling out of an orange mud with no tufa deposits. Most of the area has not been studied; it is likely that the springs occur all along the drainages.

Local residents from Craig, Klawock and Hydaburg are familiar with the springs and use them as unique and interesting places to visit, as well as collecting water for drinking. Natural mineral springs are a unique and interesting geologic resource, and are known to occur nowhere else on South Prince of Wales Island. Because the area is locally known, there is potential for increased recreation access through trails and interpretation.

POTENTIAL SPECIAL INTEREST AREAS

Note: The previous descriptions include the map number for each area.



Appendix G

Silvicultural Systems

APPENDIX G

Silvicultural Systems

Introduction

The selection of silvicultural systems is a key element in the management of the Tongass National Forest.

Silvicultural systems are used to manage forest stands. The systems used will strongly influence forest conditions and the ability to provide the outputs society desires. In recent years, the appropriateness of certain silvicultural methods has received considerable public attention. Clearcutting and the application of even-aged management continues to be a controversial issue surrounding National Forest management; it is the basis for numerous appeals, legal actions, congressional inquiries, letters, and press coverage. The controversy over size of clearcut openings led to the National Forest Management Act of 1976. The controversy of clearcutting and even-aged systems is a national issue; and Congress expressed that: 1) even-aged systems will be used only where they are determined to be appropriate to meet the objectives and requirements of the Forest Plan; and 2) clearcutting will be used only where it is determined to be the optimum method (Public Law 94-588). A significant concern about clearcutting continues to exist. The language in the FY 1991 Appropriations Bill directs the Forest Service by 1995 to reduce the level of clearcutting by at least 25 percent from FY 1989 levels. The direction notes that this reduction will occur in accordance with Forest Land Management Plans, that this is an overall national goal, and that it does not necessarily apply to a specific Forest.

The issues concerning clearcutting appear to consist of:

1. To some, if not most, forest visitors timber harvest is ugly; and clearcutting is the ugliest of all harvest methods.

2. The larger the opening created by clearcutting, the more suspicion there is about our ability to mitigate potential watershed and wildlife degradation.

3. The suitability and appropriateness of forest lands for timber management is widely disputed. To the public, clearcutting is the visible means of intensive forest management; and the issue of land allocation to timber management is most likely to occur when clearcutting occurs on disputed land.

Many critics of National Forest Management have suggested that the Forest Service consider alternatives to clearcutting and even-aged management. Uneven-aged management has been regarded by some critics as the ultimate ideal. This view may ignore the ecological characteristics of the species involved, the limitations of topography and terrain, the presence or absence of damaging agents, economics, operational feasibility, the variation found in forest stands, and multiple-use objectives the the Forest is managed to achieve. No single silvicultural system can produce all desired combinations of products and amenities from a particular stand, or from a National Forest.

Appendix G documents the rationale used to determine appropriate harvest systems to be used in managing the forest stands on the Tongass National Forest during the next 10 years (or the life of the Forest Plan) where timber production is a management goal. Criteria for the selection of harvest cutting methods to be used on National Forests in Alaska are provided in 36 CFR 219.27(b) and in the Alaska Regional Guide (November 1983).

Selection of the appropriate silvicultural systems occurs at both the National Forest land management planning level and Ranger District project level. The Forest's selection is based on a broad match of silvicultural systems with the ecological characteristics of the vegetation and the overall planning objectives of broadly-defined Land Use Designations (from the Forest Plan). Examples of Land Use Designations that allow timber harvest are Timber Production, Modified Landscape, Scenic Viewshed, Stream and Lake Protection, and Fish Habitat and Water Quality. An estimate of the most likely harvest methods used on the Forest is made to project the effects and predict costs and yields for the Supplement to the Draft Environmental Impact Statement.

Site-specific project level selection of silvicultural systems is typically made by a certified silviculturist, and evaluated through the NEPA process. Choices are based on matching the attributes of the silvicultural systems with specific management objectives and the ecological characteristics for specific stands.

Silvicultural Systems

This section describes the major silvicultural systems considered in land management planning for the Tongass National Forest, and considering both the biological and managerial factors, the advantages and disadvantages of each. Much of the information also applies to selecting an appropriate silvicultural system for a particular stand.

Silviculture can be defined as the theory and practice of manipulating forest vegetation--that is controlling the establishment, composition, and growth--to meet various resource management objectives and desired future conditions. Objectives may include aesthetics, water, timber, wildlife, or recreation. Wood production may or may not be a primary objective. For example, the methods used to improve wildlife habitat in the forest are silvicultural. Silviculture is applied forest ecology.

A stand is a forest community possessing sufficient uniformity in composition, age, spatial arrangement or condition, to be distinguishable from adjacent communities and capable of being mapped. A silvicultural system is a program of treatments throughout the life of the stand; it is the process by which the stand is grown for a specific purpose; and it is the means of reaching a desired future condition. This process includes the harvest or regeneration of the stand, intermediate cuttings, and other cultural treatments necessary for the replacement and development of the forest stand to meet desired future conditions.

Silvicultural systems are applied through prescriptions, which are written records of the examination, diagnosis, and treatment regimes prescribed for the stand. Prescriptions are usually prepared and written by certified silviculturists.

Silvicultural systems are adaptations of natural occurrences. Nature makes "regeneration cuttings" by means of fire, insects, disease, wind, and other

phenomena; by removing a single tree, a small group of trees, a stand, or sometimes a whole forest.

Silvicultural systems are named for the method of regeneration cutting by which the stand is replaced. These regeneration cuttings are: selection (single tree and group), seed tree, shelterwood, and clearcut. They can be grouped into even-aged and uneven-aged systems.

Even-aged systems produce stands that consist of trees of the same or nearly the same age. (A stand is considered even-aged if the range in tree ages normally does not exceed 20 percent of the rotation age--the age at which the stand is harvested.) Even-aged stands have a beginning and an end point in time. Seed-tree cutting, shelterwood cutting, and clearcutting will produce even-aged stands.

Uneven-aged systems create stands that include three or more distinctly different age classes. Uneven-aged stands have no beginning or end point in time. Selection cutting will produce uneven-aged stands.

Even-aged Systems

Even-aged systems produce distinct successional stages, and there are even-aged stands of various ages and sizes distributed throughout the managed forest. Consequently, even-aged forests have relatively low vertical diversity, but they have a high degree of horizontal diversity --the forest is a mosaic of forest and openings. The low vertical diversity is a result of the comparatively simple structure of the even-aged stand.

Clearcutting method. The clearcut method is the removal of entire stand in one cutting, and forest reproduction is obtained artificially or by natural seeding from adjacent stands. In the silvicultural sense, the cutting operation includes all standing woody vegetation. A variant of the method includes felling merchantable trees only, and with careful harvest techniques--with subsequent survival of advanced regeneration. The clearcut method mimics large-scale disturbances such as wildfire or windstorms. The prime objective of this method is to reestablish an even-aged stand by removing the mature one.

The clearcutting method with natural regeneration has been the most commonly used system on the Tongass National Forest, where timber production is the primary objective. The system successfully emulates the major natural disturbance (windthrow) and usually provides abundant regeneration. The regeneration is derived partly from wind-dispersed seed and partly from advanced regeneration that has survived the logging operation.

Some advantages of the clearcutting method are: 1) it permits longer cable yarding distances than would be practical in partial cutting--permitting wider road spacing, reduced road costs, and less soil disturbance caused by road construction; 2) exposure to the sun raises soil temperatures, which speeds decomposition of the organic forest floor, improving the productivity of the forest site; 3) clearcutting favors regeneration of Sitka spruce (reduces the competitive advantage of the hemlock); 4) it provides the greatest potential for eliminating residual overstory trees infected with dwarf-mistletoe, which prevents infection of new western hemlock stands; 5) it eliminates the risk of blowdown in residual stands; 6) there is no logging damage to standing timber; and 7) logging costs are lower than with other systems.

Some disadvantages of clearcutting are: 1) seedling distribution is uneven and parts of an area may become understocked or overstocked; 2) species control is poor; 3) the chance of blowdown along cutting boundaries is increased, but can be reduced through design of cutting units; 4) clearcutting tends to reduce protection against erosion, landslides, and rapid runoff of water; 5) clearcutting is aesthetically the least desirable method, because of the devastated appearance of recently-harvested areas; 6) regeneration may be delayed and growth conditions may deteriorate rapidly; 7) unprofitable trees may have to be cut; and 8) the method has generated considerable public controversy.

Seed-tree method. The seed-tree method is the removal of the old stand in one harvest entry, except for a small number of trees left singly, in small groups, or narrow strips, as a source of seed for natural regeneration. This method mimics a large-scale disturbance, which leaves a few mature trees per acre to serve as a seed source.

Some advantages of the seed-tree method are: 1) when compared with clearcutting, there is a better distribution of seed; 2) species composition is better than with clearcutting; 3) more extensive areas of timber can be regenerated in areas too large to be seeded naturally from adjacent stands; 4) logging costs are low; 5) seed-tree cutting has slightly better aesthetics than clearcutting; and 6) seed trees add some vertical diversity

Some disadvantages of the seed-tree method are: 1) it is limited to windfirm trees and it is not feasible where seed trees will be blown over by wind; 2) control of spacing and the timing of the new crop is difficult; 3) harvesting seed trees is costly and regeneration damage may occur; 4) soil protection is not much different than clearcutting; 5) the seed-tree system is commonly limited to lightweight-seeded species; and 6) it is inappropriate when the seed trees have infestations of hemlock dwarf-mistletoe (parasitic plant).

Shelterwood method. The shelterwood method involves the gradual removal of the entire stand in a series of partial cuttings which extend over a fraction of the rotation. The establishment of a new stand occurs under the canopy of the old stand. Shelterwood cuttings mimic large-scale natural disturbances in which most trees are lost and the residual large trees may provide seed and shelter the natural regeneration from extreme heat and cold. Hemlock and spruce lend themselves to shelterwood cutting because both species can become established under a forest canopy.

Some advantages of the shelterwood method are: 1) it allows ultimate control of site conditions for the regeneration of even-aged stands; 2) natural regeneration is usually more certain than from the seed-tree or clearcut methods because there is a more abundant source of seed; 3) good soil protection is provided; 4) superior to all methods, except selection, with respect to protection of site and aesthetic considerations; 5) can be applied to large areas; 6) provides the best control over species composition, amount, and distribution; and 7) sheltering trees add some vertical diversity.

Some disadvantages of the shelterwood method are: 1) logging costs are increased because of the returns to the same area for smaller volumes and the care that must be exercised to prevent excessive damage; 2) it requires a fairly windfirm species and it is not feasible where the sheltering trees will be blown

over; 3) unavoidable damage to residual stand and reproduction occurs during logging, particularly on cable ground; 4) shelterwoods are inappropriate when the sheltering trees have infestations of dwarf-mistletoe; 5) overstocking of regeneration may be expected;. 6) it is difficult to maintain spruce in the understory, because hemlock can tolerate more shade than spruce; and 7) growth rate of seedlings is slower under shade.

Uneven-aged Systems

Uneven-aged systems management regimes produce stands of high structural diversity because of the intermingling of the different age classes. Regulation of the forest is based on development and maintenance of a range of tree diameters, with many trees in the smaller diameter classes and progressively fewer in the larger diameter classes. These forests have a high degree of vertical diversity, but horizontal diversity will be low. The system produces large blocks of continuous forest cover dominated by relatively mature trees; there is a gradual reduction of shade intolerant trees and understory plants. This system has not been formally tested in the hemlock-spruce type of Southeast Alaska.

Single-tree method. Trees are removed individually, here and there, from a large area each year. Regeneration and intermediate cuttings are usually done in one operation; each tree is evaluated for its contribution to the desired characteristics of the uneven-aged stand. This method simulates natural disturbances caused by the death of scattered trees. Regeneration occurs under the partial shade of larger trees, and seedlings must be able to grow in a shaded environment. Sitka spruce and western hemlock are adapted to grow in a shaded environment. Under the selection method, the stand always has some relatively old trees.

Some advantages of the single tree selection are: 1) it is capable of maintaining an uneven-aged stand; 2) reproduction of tolerant species is easily obtained; 3) site protection is excellent with little or no exposure to insolation (exposure to sunlight) and wind; 4) stands can be readily adapted to changing market conditions; 5) this method usually has the highest aesthetic rating.

Some disadvantages of the single tree selection method are: 1) highly skilled people are needed to implement it; 2) logging costs are higher because of the small volume per acre, the frequent entries required for each stand, the complexity of the logging systems, and the care necessary to hold damage to an acceptable limit; 3) crop trees are scattered throughout the stand; 4) partial cutting increases the risk of wind damage; 5) a more extensive road system is necessary to obtain the same volume of timber obtained by use of other systems; increased roading could lead to increased erosion rates; 6) single tree selection is not suitable for hemlock stands infected with dwarf-mistletoe; and 7) frequent light entries can result in accelerated stand deterioration as the stand is opened up to wind; and 8), due to frequent entries boles and roots of residual trees may be damaged from felling and yarding tall, large diameter trees with lots of defect.

Group Selection Method. Trees are harvested in small groups (usually less than about two acres). The openings created in the stand resemble miniature clearcuts, and the uneven-aged stand is composed of a mosaic of even-aged groups. The small openings simulate small natural disturbances.

Some advantages of the group selection method are: 1) the regeneration in the small groups grows up under even-aged conditions with better bole form; 2) harvesting is more concentrated so logging costs are lower than single-tree selection; 3) harvesting in groups lowers damage to the residual stand; 4) group selection tends to increase diversity of plants and animals because of a temporary increase in shade-intolerant plants in the small openings; 5) intermediate cuts may be made less frequently without sacrificing diameter class distribution, although composition may be affected; 6) the small groups may be aesthetically more acceptable to some people; and 7) the small openings may be more favorable for spruce regeneration.

The disadvantages of the group selection method are the same as the single-tree method but to a lesser degree. The major limitations on its use are the operational difficulties in the steep, rugged topography of the Tongass National Forest.

Silvicultural Systems and Forest Characteristics

Table G-1 lists preferred harvest cutting methods to achieve certain desired forest characteristics.

Table G-1
Preferred harvest cutting methods to achieve desired forest character

	Method	
Forest Character	*Even-aged*	*Uneven-aged*
Continuous Site Occupancy with Trees	Shelterwood	Single-tree Selection
Mosaic of Forest and Opening	Clearcut, Seed-tree	Group Selection
Multi-storied Stand	*	Single-tree and Group Selection
Maximum Species Diversity	Shelterwood, Clearcut	Group Selection
Large, Mature Tree Character (lengthened rotation may be needed).	Shelterwood, Seed-tree, Clearcut	Single-tree and Group Selection
Closed Canopy (except in early life of stand)	Clearcut, Seed-tree, Shelterwood	

*Can be developed through appropriate commercial thinnings in young stands.

Genetic Implications

There is a large amount of variability in the gene pool in the unmanaged forest. In a managed forest, genetic variability could be adversely affected through treatments which selectively remove trees. Harvest methods that remove the largest and highest quality trees--often called highgrading--could

result in the regeneration the product of remaining lower quality trees, and possibly, slower-growing trees. If regeneration is produced from a small number of parents or isolated trees, there is increased risk of reducing genetic quality or increasing inbreeding. Natural regeneration from a large number of parents exhibiting desirable growth and form characteristics can maintain a broad genetic base and move the genetic composition toward a higher frequency of desirable traits.

Some possible consequences in the use of various natural reproduction methods are:

Clearcutting. This method generally maintains the status quo; there is little effect on the genetic composition of the stand. The genetic composition will be similar to the adjacent stands (the parents).

Seed-tree cutting. Through the selection of the best trees, this method allows for the greatest opportunity for change in the genetic composition of the future stand. There is a low probability of the offspring being inbred because the widely-spaced trees are not likely to be related. The danger of this method is that the genetic base could be reduced if a insufficient number of seed trees are left.

Shelterwood cutting. When compared to the seed-tree method, there is less opportunity for changes in the genetic composition of the stand. Selection pressure is reduced because more trees are left. Neighboring trees are more likely to be related, therefore, this method presents the greatest danger of substantial increases in inbreeding levels.

Selection cutting. When compared to seed-tree and shelterwood cutting, selection cutting's has the least opportunity to change seed quality. This is due to the uneven-aged stand structure and the intermittent waves of seed production and regeneration. Proper application of selection cutting may lead to an upgraded bole form and tree health gene pool, but there may be difficulty in selecting for small differences in growth. If improperly applied, "highgrading" the better trees and selecting poorly among the lower age classes, selection cutting is likely to lead to a lowering of genetic quality.

Silvicultural Systems and Timber Harvesting

Five important aspects of timber harvesting are strongly influenced by the choice of silvicultural system: 1) variability in sizes of harvested trees; 2) area to be harvested; 3) complexity of the harvesting treatments; 4) the probability of causing significant damage to trees left in the stand; and 5) the probability of causing long-term root disease problems. The first three influence harvesting efficiencies, and the other two affect the vigor, tree stocking, and value of the residual (remaining) stand.

There is wide size variation in trees harvested in each operation under the selection system. Harvesting efficiency is reduced because logging equipment is dependent upon tree size. Although in young-growth stands, because of their size, this disadvantage could be insignificant.

Harvesting with the selection system is much less cost-efficient than for the other systems. More land must be treated in each operation to harvest the same desired yield from the forest.

Harvest treatment complexity is also greatest with the selection system. Identifying which trees or groups of trees to cut, determining where they are to be felled, felling the trees in the designated areas, and removing the trees or logs out of the stand without damaging the residual trees can be very difficult and costly. In the selection method, cuttings occur as frequently as every five to ten years. In other systems, only the intermediate cuttings are as complex. The regeneration cuttings in the other systems are more straightforward operations. Clearcutting is the most efficient.

Logging damage to trees left to grow in the stand is typically greatest for the single-tree selection system. Selective harvesting of trees in dense stands without damaging many remaining trees is very difficult, particularly on steep slopes. Damaged trees are often the entry site for wood-decaying fungi that may persist in the soil for long periods, thus retaining the capacity to infect new trees. These fungi reduce the windfirmness, vigor, commercial value, and stocking of trees left after harvest.

Silvicultural Systems and Administration

There is a significant difference in the record keeping, inventory, and project administration required for uneven-aged systems versus even-aged systems. The detailed information needed to plan and carry out treatment, as well as the frequency of treatments, make the uneven-aged systems more costly to manage. More accuracy is needed in the inventory information to prescribe harvest from several tree classes. To achieve this resolution in data collection, stands must be stratified to a finer detail; many more stands must be inventoried, have records kept on them, and be administered. Even utilizing computers for data management, this level of complexity would quickly become unmanageable.

Criteria for the Selection of Harvest Cutting Method

Criteria for the selection of harvest cutting methods to be used on National Forests in Alaska are provided in 36 CFR 219.27(b) and the Alaska Regional Guide (November 1983). The selected method must meet all of the criteria, which are:

1. Be capable of meeting special management and multiple use objectives (36 CFR: Criteria 1 and 6, Regional Guide: Standard 2);

2. Permit control of vegetation to establish desired species composition, density, and rates of growth (36 CFR: Criteria 4 and 6);

3. Promote a stand structure and species composition which minimize risks from solar radiation, disease, and windthrow (36 CFR: Criterion 4, Regional Guide: Standard 2);

4. Use available and acceptable logging methods (36 CFR: Criterion 4, Regional Guide: Standard 2);

5. Assure that lands can be adequately restocked (36 CFR: Criterion 2);

6. Be practical and economical in terms of transportation, harvesting, preparation, and administration of timber sales (36 CFR: Criterion 7, Regional Guide: Standard 2); and

7. Not be selected solely on the basis of greatest dollar return or highest output of timber, and not permanently reduce site productivity or impair conservation of water and soil resources (36 CFR: Criteria 3 and 5).

Factors Influencing Choice of Silvicultural Systems

Key factors in the determination of appropriate systems on the Tongass National Forest are: existing stand conditions, silvical characteristics--that is the reproductive habits and growth requirements--of the tree species, the operational environment (physical and biological setting), and the management objectives that are to be achieved.

Existing Forest Conditions

The forest of Southeast Alaska is predominantly an old-growth forest generally undisturbed by humans. The Forest is largely unroaded. Most old-growth stands are a mosaic of small groups of more-or-less even-aged trees arranged in complex patterns. Most stands are often composed of trees of advanced age, declining vigor, and large amounts of defect. Wind is the major disturbance factor. Scattered windthrow of large, overmature trees is a prime cause of mortality and creates gaps in the main canopy into which advanced growth from the understory or newly-germinated seedlings may develop. Occasional severe storms disturb large areas, initiating secondary forest succession, creating stands of relatively uniform age and size.

Individual tree species and species occurrence vary by location, topography, drainage, soil type, and stand history. Western hemlock and Sitka spruce stands cover 98 percent of the land capable of growing industrial wood in Southeast Alaska. The remaining two percent of the forest land supports western redcedar, Alaska-cedar, and cottonwood. The cedar is primarily found in the southern part of the Forest. In the north, the percentage of hemlock increases.

Silvical Characteristics

Tree species differ in their requirements for moisture, light, nutrients, heat, and growing space. A brief silvical description of the two most common species on the Tongass National Forest follows.

Sitka spruce (*Picea sitchensis (Bong.) Carr.)* is the largest and one of the most valuable trees on the Tongass - both biologically and economically. This species is classified as tolerant (tolerance is the ability to grow and prosper in the understory; light, moisture, or other environmental variables may be the limiting factor) and demands more light than its associates, western hemlock and western redcedar (Harris and Farr, 1974). Sitka spruce is a prolific seeder and produces small seed that can be carried long distances. If moisture is abundant, Sitka spruce seed will germinate on almost any kind of seedbed; consequently, natural regeneration can be obtained through various reproduction methods. Establishment is best on mineral soil with organic matter and with side shade and overhead light. Spruce has an advantage over hemlock on bare soil. The percentage of spruce reproduction often can be increased by clearcutting and exposing more mineral soil during the logging operation (Fowells, 1965). The rooting characteristics of Sitka spruce show great variability, but in Southeast Alaska this species tends to be shallow-rooted; consequently, it is vulnerable to compaction and blowdown. The bark is relatively thin, which makes it susceptible to logging injury and subsequent decay. Blowdown is the most serious damaging agent.

Western hemlock *(Tsuga heterophylla (Raf.) Sarg.)* is also a major component of the Tongass. Western hemlock is classified as very shade tolerant and dominates the reproduction of the old-growth forests (Fowell, 1965), which makes it an ideal species for management that includes partial cutting. Other associated conifers include western redcedar (*Thuja plicata Donn*), Alaska-Cedar (*Chamaecyparis nootkatensis (D. Don) Spach*), shore pine *(Pinus contorta var. contorta)*, lodgepole pine *(Pinus contorta)*, Pacific silver fir *(Abies amabilis (Dougl.) Forbes)*, subalpine fir *(Abies lasiocarpa (Hook.) Nutt.)*, and mountain hemlock *(Tsuga mertensiana (Bong.)*. Hemlock is a prolific seeder and produces seed almost every year, with heavy crops every five to eight years. The seed is small and can be carried long distances in strong winds. The species can thrive on a wide variety of seedbeds; consequently, natural reproduction can be obtained through various reproduction methods from single tree to clearcutting. Most stands contain advanced regeneration and through careful logging are often adequately stocked or overstocked. Hemlock does not develop a taproot and is also a shallow-rooted species. It is susceptible to windthrow. Most of the roots, particularly the fine roots, are near the surface, and are susceptible to damage from compaction. Like spruce, this species has thin bark and is susceptible to logging injury and subsequent decay. Hemlock dwarf-mistletoe is an important disease and is usually best controlled by clearcutting.

Operational Environment

Climate. The forest has a maritime climate with abundant moisture throughout the year and has relatively mild winter temperatures and cool summers. Lack of a pronounced drought is probably the most important factor in affecting vegetation. The combination of warm water from the Japan current offshore and prevailing westerly onshore winds result in cool, humid conditions throughout the Tongass National Forest. The weather patterns of Southeast Alaska develop strong wind patterns and winter storms tend to be very intense. Gale-force winds may occur during any month; however, the strongest winds are most likely to occur in fall and winter months. The strong winds are usually accompanied by rainfall, and saturated soils contribute to blowdown.

The management implications of climate are: 1) moisture is not a limiting factor in tree regeneration; 2) wildfire is not a major problem; 3) high winds can cause heavy losses of timber by windthrow; and 4) the strong fall winds favor natural regeneration. Both spruce and hemlock are prolific seeders; producing seed almost every year with good crops every five to six years. Their seeds are light in weight and are capable of being blown long distances.

The rooting habits of western hemlock and Sitka spruce make these species susceptible to windthrow; both species are shallow-rooted and depend on mutual support for wind resistance. Western hemlock does not develop a taproot. Both species are thin-barked, which makes them susceptible to logging damage to their boles and subsequent wood decay. Trees with stem or root rots are more susceptible to damage from the wind.

Wind is a major disturbance factor in Southeast Alaska altering the structure of the forest. Scattered windthrow of large overmature trees is a prime cause of mortality and it creates small openings in which the advanced growth in the understory may develop (group selection would mimic this effect). Spruce is able to maintain itself as a stand component because of these small openings created by windthrow. Stands covering many acres can also be blown down.

Many existing young-growth stands originated following the blowdown of the previous stand. The traits of windfirm stands and stands susceptible to damage by wind are documented in Table G-2.

Table G-2
Traits of windfirm stands and traits of stands susceptible to windthrow

Trait	Windfirm Stands	Susceptible Stands
Age	Young	Old
Age Structure	Even-aged	Uneven-aged
Defect	Little Defect	Large amounts of defect
Height	Short	Tall
Stocking	Open stocking on less productive sites, muskeg and scrub stands	Dense stocking on productive sites.
Species Composition	High percentage of cedar and hardwoods.	Predominately spruce and hemlock
History	Intact with little evidence of recent openings.	Previously damaged by blowdown. Even-aged pole or young sawtimber opened by thinning or partial cutting.

Source: Wind in the Forests of Southeast Alaska and Guides for Reducing Damage, A.S. Harris, PNW-GTR-244.

Mass movement. The landscape of the Tongass has been shaped largely by glaciation, resulting in landforms with an abundance of very steep slopes and U-shaped valleys. Unconsolidated soil materials include glacial till, volcanic sediments, alluvium (sediments deposited by flowing water), colluvium (rock debris accumulated at the base of a cliff or slope), residium (residue), and organic matter. Fine-textured marine and lake deposits occur on valley bottoms and lower hillsides. The downslope movement of large masses of earth is due to the topography (oversteepened slopes--unstable slopes or slopes beyond their angle of repose-- high up on the valley walls); climate (abundant rainfall); youthful, shallow, coarse-textured soils with relatively high permeability; and minimal surface runoff. Slopes of 34 degrees or greater are highly susceptible to failure when large-scale clearcutting is used. Tree roots may be an important factor in maintaining slope stability. In the past, clearcut timber harvesting has caused some mass soil movements, therefore the clearcut or seed-tree silvicultural systems may not be appropriate for areas susceptible to mass wasting.

The topography influences the choice of logging methods and silvicultural methods. Historically, most yarding has been downhill because roads are usually located in valley bottoms to avoid the unstable soils on the steep slopes. Cable logging downhill in partial cuts is especially difficult because of inadequate deflection of the cable for full suspension and lack of adequate tailholds. Spruce and hemlock are prone to logging damage because of their thin barks. The risk of damage to residual trees is extremely high when cable logging methods are used to remove trees on steep slopes. Stands typically consist of large old trees with significant defect. Large old growth yarders are used to remove these logs. To control residual stand damage the logging plan must incorporate and the logger must conduct operations recognizing the following: 1) eliminate cross-slope yarding where dragging of logs is involved; 2) during lateral yarding, position the skyline so that the entire log turn will be suspended above the ground when the logs enter the skyline corridor; 3) yard with the skyline positioned high above the ground to reduce skyline corridor width (lateral excursion); 4) fly log turns free of the ground in downhill yarding; and 5) restrict skyline setting size to control fan-shaped settings (clearcut effect).

Since all of these conditions can not be met on most areas of the Tongass cable logging is generally impractical for partial cuts. Other, more costly options, such as helicopters would have to be used.

Animals. Several species of animals are present that directly compete with regeneration efforts. These animals are Sitka black-tailed deer, rabbits and brush hares, and voles and mice. Sporadic efforts have been undertaken to control damage done to young seedlings, however, the amount of damage attributed to these animals is small. Porcupine also has impacted 15-25 year-old stands on the Stikine area.

Diseases. Losses from tree diseases are high principally because of the old-growth structure of the forest (Harris and Farr, 1974). About 32 percent of the gross volume is estimated to be unusable as sawtimber. *Heterobasidion annosum* is an important pathogen of western hemlock and Sitka spruce. *Poria albipellucida* and *phellinus weirii* are also found in western redcedar.

The principle stem disease on the Tongass is western dwarf-mistletoe, a parasitic plant, (*Aceuthobium campylopodum*); it infects western hemlock and causes reduction in vigor, growth and quality of the hemlock. The volume of western hemlock trees heavily infected with dwarf-mistletoe can be reduced as much 50 percent over a 100-year period. The spread of dwarf-mistletoe in young hemlock stands is often the result of leaving standing infected hemlock in cutover areas. Dwarf-mistletoe responds to light with increased seed production; rates of spread to adjacent and lower canopy trees may increase in partial cuts.

Insects. Two defoliating insects, the black-headed budworm *(Acleris gloverana (Wals.))* and hemlock sawfly *(Neodipirion tsugae)* have been documented on the Tongass (Hard, 1967). Periodically, they cause widespread defoliation, particularly to western hemlock. However, in most cases the attacked trees recover and have had little effect on growth or survival (Harris and Farr, 1974). The spruce beetle *(Dendroctonus rufipennis (Kby))* is also found in Southeast Alaska; it normally is at endemic levels in old-growth stands. There has been a serious outbreak in an area of Glacier Bay National Park. The stands involved in the outbreak are generally even-aged Sitka spruce about 200 years old.

Management Goals and Objectives

The goals and objectives most affecting the choice of silvicultural systems are those that relate to producing timber, and those that in some way conflict with or modify the way timber is produced. Most of the alternatives specify a fairly intensive level of management for those areas allocated to management emphases that include programmed timber harvests. There are also goals for providing habitats to support all native wildlife species, protecting soil and water, and providing recreation opportunities. Throughout all of the management programs and activities, implementation should be accomplished in an efficient and cost-effective way.

Some of the management objectives relating to selection of silvicultural systems vary by the Land Use Designation defined for alternative land allocations. Many of the twenty-three Land Use Designations do not have objectives for timber management. Seven of the twenty-three designations include some degree of timber harvesting; and they are:

Land Use Designation SR - Scenic Rivers.
This land use designation includes an area, generally a corridor 1/4 mile each side of the ordinary high water mark of the river, along river segments which qualify to be considered eligible for inclusion in the National Wild and Scenic River System as a Scenic River. The objective is to maintain, enhance, and protect the free-flowing character and values that qualify the river as a Scenic River. Harvest activities are limited to ensure compliance with visual standards and guidelines.

Land Use Designation RR - Recreation Rivers
This land use designation includes an area, generally a corridor 1/4 mile each side of the ordinary high water mark of the river, along river segments which qualify to be considered eligible for inclusion in the National Wild and Scenic River System as a Recreation River. The objective is to maintain, enhance, and protect the free-flowing character and values that qualify the river as a Recreation River. Harvest activities are limited to ensure compliance with visual standards and guidelines.

Land Use Designation SV - Scenic Viewshed
Areas considered for allocation to this designation are generally immediately adjacent to and visible from major travel routes, rivers, and other high-use recreation areas. Management activities in the visual foreground are not evident to the casual observer and subordinate to the characteristic landscape in middleground and background views. Implications for timber management are that harvest activities are typically small and affect only a small percentage of the viewshed.

Land Use Designation ML - Modified Landscapes
The objective of this land use designation is to provide a mix of management options, while minimizing the visibility of development activities in the foreground and allowing more development in the middle and background distances. The desired future condition is that of a multi-aged forest landscape where activities are designed to borrow from and relate to features found in the characteristic landscape.

Land Use Designation TM - Timber Production
This is the major timber-producing land use designation for the Forest. The primary goal is to obtain a full yield of timber within the capability of the land and the management requirements of other resources. Timber harvest is programmed on suitable lands throughout this allocation.

To meet short and long-term timber production goals, the majority of existing stands will be harvested in the next seven to ten decades. Managed stands should contain stocking in sufficient number and quality to near fully utilize the site's tree-producing capacity. Losses to destructive agents such windthrow, animal damage, and disease should also be minimized.

Land Use Designation WQ - Fish Habitat and Water Quality Requirements
This designation applies to Alternative D only. The objective of this designation is to meet the basic requirements for riparian areas, fish habitat, and water quality, as defined by: 1) the National Forest Management Act's implementing regulations (36 CFR 219.27(e)); 2) Section 103 of the Tongass Reform Act; and 3) the Clean Water Act. Commercial timber harvest is prohibited within no less than 100 feet of each side of all Class I streams and on those Class II streams which flow directly into Class I streams. In other areas, commercial timber harvest is allowed provided that no serious and adverse effect to fish habitat or water quality would occur.

Land Use Designation SL - Stream and Lake Protection
This designation applies to Alternatives A, B, C, and P. The objective of this designation is to meet the basic requirements for riparian areas, fish habitat, and water quality, as defined by: 1) the National Forest Management Act's implementing regulations (36 CFR 219.27(e)); 2) Section 103 of the Tongass Reform Act; and 3) the Clean Water Act. Commercial timber harvest is prohibited within no less than 100 feet of each side of all Class I streams and on those Class II streams which flow directly into Class I streams. In other areas, commercial timber harvest is allowed provided that it is not in conflict with the maintenance or improvement of riparian-associated resources.

Rationale for Selection of Harvest Cutting Methods

Both even-aged and uneven-aged harvest cutting methods are available for selection within the Forest's tentatively suitable productive forest lands. When determining what silvicultural system to use for Forest Planning, an evaluation was made of the biological and operational feasibility of all harvest systems.

Factors other than the silvical or ecological limitations of the species weigh heavily in the choice between uneven- and even-aged management and among the several silvicultural systems that can be used to create even-aged stands. These include economic considerations, other resource values, management objectives, terrain considerations with its limitations on logging systems, and other operational environmental considerations such as the presence or absence of dwarf-mistletoe, susceptibility to windthrow, and susceptibility to logging damage.

The Tongass National Forest is composed largely of large overmature trees. The terrain is steep and unroaded with saturated soils requiring expensive road systems with a need to move large pieces of logging equipment. All these factors weigh heavily in favor of clearcutting. Because uneven-aged manage-

ment requires frequent access by truck, the only logical approach is to develop a permanent road system to service all the scheduled suitable lands in each management area. Economics can neither rule or be ignored, but high fixed costs need to be spread over the largest volume of timber that can be cut from a single road or yarding setting. The Forest is largely unroaded; economic sale offerings often require a minimum of two million board feet per mile (2 MMBF/mile) of new road construction. The volume per acre from uneven-aged management would not allow the opportunity to spread costs over the entire merchantable volume on a cutting area and maintain economic sale offerings.

For planning purposes and programmatic effects analysis, clearcutting with reliance on natural seeding from adjacent timber borders or blocks was selected as the basic silvicultural system for hemlock-spruce forests where timber production is the primary use. Refer to Table G-3 for identification of selected harvest systems by Land Use Designation. All silvicultural systems are available for site-specific project level design and analysis. The specific silvicultural system will be selected on a site-specific basis as identified in environmental assessments or in silvicultural prescriptions written or approved by certified silviculturists.

The clearcut and seed-tree methods are not appropriate on those soil types that are susceptible to mass-wasting. The selection system has not been tested in the Sitka spruce-western hemlock forest type in Southeast Alaska, but based on the silvical characteristics of the species, the system has merit. Where objectives cannot be met by the clearcut method, other methods such as shelterwood and selection are reasonable alternatives, provided that the operational constraints can be overcome.

Table G-3.
Appropriate harvest systems as identified in the Forest Plan

Land Use Designation	Appropriate Harvest Systems
Scenic Rivers	Selection, limited even-aged harvesting.
Recreation Rivers	Selection, moderate even-aged harvesting.
Scenic Viewshed	Selection, moderate even-aged harvesting.
Modified Landscape	Group Selection, moderate to intensive even-aged harvesting
Timber Production	Intensive even-aged harvesting
Stream and Lake Protection	No harvest, selection, moderate even-aged harvesting
Fish Habitat and Water Quality	No harvest, slection, moderate to intensive even-aged management.

Those Land Use Designations that contain selection or group selection harvest systems are lands that will be managed primarily for maintenance and improvement of resource values other than timber. Generally, any management of the timber resource on these lands will be for stand maintenance purposes only and will approach an uneven-aged silvicultural system. Production of high current or future timber yields is not a consideration.

Stand maintenance is not, strictly, a silvicultural system. Under this management regime or concept, individual trees or small groups of trees are removed if conditions indicate a disease or pest threat to the stand, imminent mortality, severe decline in growth, or trees in cable corridors. Stand maintenance, while a form of uneven-aged management, should not be confused with the selection system (group or individual-tree) of management. Selection implies strict stocking control and a high intensity of management to maintain a predetermined ratio of tree ages and diameter classes in every stand. The intent is to manage the timber stands on these lands in order to maintain or bring them to the best condition possible until actual selection silviculture becomes feasible on these lands, until even-aged management can be made environmentally acceptable, or the lands are classified as unsuitable.

Rationale for Continued Clearcutting:

1. It is the most effective means of controlling dwarf-mistletoe. The removal of infected trees interrupts the life cycle of dwarf-mistletoe and reduces the chance for infestation of the future stand. (36 CFR: Criterion 4, Regional Guide: Standard 2)

2. It eliminates the risk of blowdown in residual stands. The potential for windthrow increases along cutting boundaries but can be reduced through proper design of cutting units. (36 CFR: Criterion 4, Regional Guide: Standard 2)

3. It eliminates the risk of stand damage to the residual stand. The spruce-hemlock stands are composed of large trees and require large pieces of logging equipment which can cause significant damage to the residual stand. Spruce and hemlock tend to be shallow-rooted and, therefore, susceptible to damage from ground-based systems; clearcutting reduces these risks. (36 CFR: Criterion 4, Regional Guide: Standard 2)

4. It favors spruce. The logging operation will destroy some of the advance hemlock regeneration and thus take away its initial advantage. The increased sunlight also favors the spruce. (36 CFR: Criteria 4 and 6)

5. It can improve productivity. The cold air temperature and soil temperature do not favor decomposition of the organic forest floor. Exposing the site by clearcutting raises temperatures, which speeds the decomposition of raw humus. (36 CFR: Criterion 5)

6. It requires less road development. Less road construction is needed to remove a given amount of timber. Clearcuts favor longer spans which also allows for increased spacing between roads. (36 CFR: Criterion 5)

7. It is less costly. Fixed costs are spread over large volumes per acre and logging and roadbuilding is more concentrated. (36 CFR: Criterion 3 and 5, Regional Guide: Standard 2)

8. Natural regeneration is generally adequate. Experience with clearcutting since the 1950's has shown that, except for certain situations, attaining natural regeneration is not a serious problem on the Tongass National Forest. Stocking control is usually necessary between the ages of 15 and

20; almost all sites require some degree of stocking control. Natural regeneration is abundant; the Ketchikan area can average 3-5000 stems per acre after ten years, Stikine 6,000 stems, and Chatham 14,000 stems. Stocking control is intended to increase the rate of diameter growth of remaining trees--tree size has a significant impact on log values, improve crown ratios, favor commercially valuable trees (spruce), favor species (forage) or age classes which are most valuable for wildlife, windfirmness may be increased with early thinnings, or achieve other multiple-use objectives. (36 CFR: Criterion 2)

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Appendix H

Timber Yield Tables

APPENDIX H

EMPIRICAL TIMBER YIELD TABLES

INTRODUCTION

The following tables depict timber yield on the Tongass National Forest by administrative areas (Ketchikan, Stikine and Chatham) by low, medium and high site classifications for stands without and with precommercial thinning prescriptions. Culmination of mean annual increment (CMAI) is depicted by the last column in the tables whereby merchantable volume in cubic feet per ten year growth period begins to fall off with age. At this point in the life of the stand, the average annual growth in volume is equal to, or less than, the average growth in volume over the life of the stand. This measurement represents the point at which the annual growth rate begins to slow as compared to the average rate of growth during all previous years. Optimum rotation age is at the point at which the CMAI is achieved. Site index values used for the development of the timber yield tables are based on the Farr site index variables.

Research in Southeast Alaska has determined that on most reestablished stands, 100 percent restocking is not feasible due to site limitations. The empirical yield tables that follow represent reduced stocking, as well as including defect and breakage considerations..

STIKINE AREA
LOW SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height (feet)	Quadratic Mean Diameter (inches)	Merchantable C.F. Volume (100)	Merchantable B.F. Volume (1000)	Mean Annual Increment (net c.f.)
10	5685	11	0.3	0.0	0.0	0.0
20	5593	21	1.3	0.0	0.0	0.0
30	3753	31	2.6	0.1	0.0	0.3
40	2149	43	3.9	0.9	0.3	2.3
50	1449	52	5.0	2.3	0.6	4.6
60	1064	62	6.0	6.8	1.7	11.3
70	829	70	6.9	16.2	4.2	23.1
80	672	78	7.9	27.8	8.4	34.8
90	567	85	8.7	38.6	13.7	42.9
100	492	91	9.5	49.9	18.5	49.9
110	431	97	10.3	60.2	23.6	54.7
120	386	103	11.1	70.4	28.7	58.7
130	349	108	11.8	79.7	33.7	61.3
140	318	112	12.5	88.7	38.5	63.4
150	292	117	13.2	96.9	43.3	64.6
160	270	120	13.9	104.2	47.3	65.1
170	252	124	14.5	111.2	51.4	65.4

CHATHAM AREA
LOW SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height (feet)	Quadratic Mean Diameter (inches)	Merchantable C.F. Volume (100)	Merchantable B.F. Volume (1000)	Mean Annual Increment (net c.f.)
10	12618	10	0.4	0.0	0.0	0.0
20	10637	19	1.3	1.6	0.8	8.0
30	4065	29	2.5	1.9	0.9	6.3
40	2067	38	3.9	3.0	1.1	7.5
50	1336	48	5.1	4.9	1.8	9.8
60	1028	58	6.0	8.7	3.0	14.5
70	823	66	6.9	16.3	4.4	23.3
80	678	74	7.9	27.9	8.5	34.9
90	573	82	8.7	36.5	13.4	40.6
100	491	88	9.6	50.1	18.4	50.1
110	425	96	10.4	61.7	24.3	56.1
120	380	102	11.2	71.3	30.1	59.4
130	340	108	11.9	81.0	35.0	62.3
140	309	113	12.8	89.6	39.7	64.0
150	316	119	13.6	98.2	44.7	65.5
160	261	122	14.2	107.0	49.2	66.9
170	243	127	14.9	113.8	53.6	76.9

KETCHIKAN AREA
LOW SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height (feet)	Quadratic Mean Diameter (inches)	Merchantable C.F. Volume (100)	Merchantable B.F. Volume (1000)	Mean Annual Increment (net c.f.)
10	4826	16	0.6	0.0	0.0	0.0
20	4812	26	1.4	0.1	0.0	0.5
30	3877	35	2.5	0.8	0.1	2.7
40	2685	46	3.7	2.7	0.6	6.8
50	1656	56	4.9	7.9	1.9	15.8
60	1130	66	6.1	17.5	4.8	29.2
70	816	73	7.4	27.6	9.0	39.4
80	618	82	8.5	39.2	14.1	49.0
90	495	90	9.7	51.7	19.6	57.4
100	409	96	10.8	63.7	25.5	63.7
110	352	102	11.8	74.4	31.3	67.6
120	308	107	12.8	85.1	37.1	70.9
130	275	109	13.8	94.8	42.6	72.9
140	247	117	14.8	103.7	47.7	74.1
150	226	120	15.6	111.4	52.3	74.3
160	208	122	16.4	118.4	56.8	74.0

STIKINE AREA
MEDIUM SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	5685	11	0.3	0.0	0.0	0.0
20	4836	23	1.9	0.0	0.0	0.0
30	2402	36	3.7	0.5	0.1	1.7
40	1386	49	5.1	1.4	0.4	3.5
50	973	61	6.3	5.8	1.2	11.6
60	742	72	7.4	16.7	4.4	27.8
70	598	82	8.4	30.7	10.0	43.9
80	501	90	9.4	45.4	16.6	56.8
90	430	98	10.4	59.5	23.1	66.1
100	377	104	11.2	72.3	29.6	72.3
110	335	111	12.1	84.4	36.4	76.7
120	300	116	13.0	95.0	42.5	79.2
130	272	121	13.8	104.8	48.2	80.6
140	249	126	14.6	113.7	53.5	81.2
150	229	130	15.4	121.8	58.4	81.2
160	213	134	16.1	129.0	63.0	80.6

CHATHAM AREA
MEDIUM SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	12618	10	0.4	0.0	0.0	0.0
20	6891	22	1.9	1.6	0.8	8.0
30	2333	33	3.7	2.7	1.0	9.0
40	1406	46	5.0	3.9	1.5	9.8
50	961	57	6.3	10.8	2.7	21.6
60	747	70	7.4	19.6	6.5	32.7
70	595	81	8.5	33.3	11.7	47.6
80	490	91	9.5	49.2	18.4	61.5
90	418	99	10.6	63.6	25.7	70.7
100	359	107	11.6	76.8	33.4	76.8
110	312	114	12.7	89.4	40.4	81.3
120	276	121	13.6	101.8	46.6	84.8
130	247	127	14.7	111.9	53.6	86.1
140	225	132	15.5	120.9	59.3	86.4
150	204	137	16.5	129.9	65.3	86.6
160	188	142	17.4	138.0	70.3	86.3

KETCHIKAN AREA
MEDIUM SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height (feet)	Quadratic Mean Diameter (inches)	Merchantable C.F. Volume (100)	Merchantable B.F. Volume (1000)	Mean Annual Increment (net c.f.)
10	4821	16	0.6	0.0	0.0	0.0
20	4483	28	1.8	0.4	0.0	2.0
30	2744	40	3.3	1.7	0.3	5.7
40	1569	53	4.9	5.5	1.2	13.8
50	1033	64	6.3	15.7	4.5	31.4
60	734	76	7.7	29.0	9.9	48.3
70	557	85	9.1	44.5	16.3	63.6
80	438	95	10.4	59.5	23.9	74.4
90	361	103	11.7	74.1	31.7	82.3
100	302	110	13.0	88.3	39.2	88.3
110	264	116	14.2	100.1	46.4	91.0
120	234	122	15.3	111.1	53.3	92.6
130	209	127	16.5	121.8	59.7	93.7
140	189	132	17.6	131.2	65.7	93.7
150	173	137	18.6	139.4	71.0	92.9
160	159	141	19.6	147.3	76.3	92.1

STIKINE AREA
HIGH SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height (feet)	Quadratic Mean Diameter (inches)	Merchantable C.F. Volume (100)	Merchantable B.F. Volume (1000)	Mean Annual Increment (net c.f.)
10	5685	11	0.3	0.0	0.0	0.0
20	3688	26	2.5	0.1	0.0	0.5
30	1588	41	4.7	0.7	0.2	2.3
40	992	57	6.2	3.5	0.7	8.8
50	719	71	7.5	14.1	3.8	28.2
60	562	83	8.8	33.0	10.9	55.0
70	460	94	9.9	52.5	19.5	75.0
80	391	103	11.0	70.3	28.4	87.9
90	336	111	12.1	85.7	36.8	95.2
100	298	118	13.1	99.3	44.8	99.3
110	265	125	14.0	110.7	52.0	100.6
120	239	130	15.0	121.0	58.4	100.8
130	217	136	15.9	130.5	64.3	100.4
140	198	140	16.8	138.3	69.6	98.8
150	183	144	17.7	145.6	74.5	97.1
160	170	148	18.5	152.3	79.0	95.2

CHATHAM AREA
HIGH SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	12618	10	0.4	0.0	0.0	0.0
20	4444	25	2.4	1.6	0.9	8.0
30	1592	39	4.7	3.0	1.2	10.0
40	1007	55	6.2	5.7	2.2	14.3
50	718	70	7.6	17.5	5.8	35.0
60	556	83	8.8	34.6	12.0	57.7
70	450	95	10.0	55.8	21.5	79.7
80	375	106	11.3	73.8	31.5	92.3
90	321	115	12.4	87.5	39.5	97.2
100	277	122	13.6	103.5	48.0	103.5
110	242	129	14.8	116.6	54.4	106.0
120	216	136	15.9	127.6	64.0	106.3
130	194	142	17.0	138.7	71.0	106.7
140	176	147	18.0	147.3	76.7	105.2
150	160	152	19.2	156.2	83.0	104.1
160	147	157	20.2	163.5	88.1	102.2

KETCHIKAN AREA
HIGH SITE
UNMANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	4821	16	0.6	0.0	0.0	0.0
20	3887	31	2.3	0.5	0.1	2.5
30	1976	45	4.2	3.1	0.6	10.3
40	1149	60	5.8	9.9	2.6	24.8
50	755	74	7.5	25.2	8.2	50.4
60	548	87	9.0	43.5	16.4	72.5
70	423	99	10.6	62.3	25.6	89.0
80	343	108	12.1	79.5	35.0	99.4
90	287	116	13.6	96.1	44.4	106.8
100	244	124	15.0	110.8	53.5	110.8
110	214	131	16.3	123.8	61.7	112.5
120	190	136	17.6	135.2	69.4	112.7
130	169	142	18.9	146.2	76.5	112.5
140	153	147	20.2	156.0	83.2	111.4
150	140	151	21.3	164.4	89.0	109.6
160	129	155	22.5	172.5	94.6	107.8

STIKINE AREA
MEDIUM SITE
MANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
----	-------	-------	--------	-------	-------	---------
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	5685	11	0.3	0.0	0.0	0.0
20	318	20	2.6	0.0	0.0	0.0
30	318	32	4.8	0.0	0.0	0.0
40	317	47	6.9	1.5	0.3	3.8
50	316	61	8.6	13.7	2.9	27.4
60	301	73	9.9	29.0	9.0	48.3
70	279	84	11.1	44.4	15.8	63.4
80	261	94	12.1	58.5	23.0	73.1
90	245	102	13.0	71.6	30.2	79.6
100	231	109	13.9	84.6	37.2	84.6
110	221	115	14.8	96.1	44.2	87.4
120	210	121	15.6	107.6	50.9	89.7
130	199	126	16.3	117.6	56.6	90.5
140	190	131	17.0	126.3	61.9	90.2
150	180	135	17.7	133.9	66.7	89.3
160	170	138	18.4	140.9	71.2	88.1

CHATHAM AREA
MEDIUM SITE
MANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	12618	10	0.4	0.0	0.0	0.0
20	386	18	2.1	0.0	0.0	0.0
30	386	31	4.1	1.1	0.2	3.7
40	383	45	6.4	4.5	1.2	11.3
50	376	59	8.2	12.4	3.9	24.8
60	351	72	9.6	26.0	8.0	43.3
70	321	84	10.8	38.8	14.5	55.4
80	299	93	11.7	51.2	20.6	64.0
90	281	102	12.6	72.4	26.6	80.4
100	265	109	13.5	84.8	36.9	84.8
110	254	115	14.2	95.3	43.6	86.6
120	244	121	14.9	106.9	50.1	89.1
130	229	125	15.5	114.6	54.6	88.2
140	216	130	16.1	121.4	58.7	86.7
150	204	134	16.8	128.0	62.7	85.3
160	190	137	17.5	134.3	67.0	83.9

KETCHIKAN AREA
MEDIUM SITE
MANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	4821	16	0.6	0.0	0.0	0.0
20	319	29	3.5	0.4	0.0	2.0
30	318	41	5.9	2.1	0.4	7.0
40	316	55	8.1	10.9	2.1	27.3
50	302	66	9.8	25.8	7.4	51.6
60	279	78	11.2	42.4	15.2	70.7
70	255	89	12.5	57.1	22.4	81.6
80	238	98	13.6	71.7	29.8	89.6
90	223	106	14.6	86.6	38.1	96.2
100	209	114	15.7	100.4	46.1	100.4
110	196	120	16.7	113.6	54.1	103.3
120	182	126	17.8	125.0	61.4	104.2
130	169	131	18.7	134.3	67.1	103.3
140	158	136	19.7	142.9	72.7	102.1
150	148	140	20.4	149.6	77.4	99.7
160	139	144	21.3	156.1	81.9	97.6

STIKINE AREA
HIGH SITE
MANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	5685	11	0.3	0.0	0.0	0.0
20	385	23	3.1	0.0	0.0	0.0
30	385	38	5.8	0.3	0.0	1.0
40	381	56	7.9	8.4	1.7	21.0
50	346	72	9.6	29.2	8.2	58.4
60	316	86	10.9	50.7	18.8	84.5
70	291	96	12.1	68.6	28.1	98.0
80	271	106	13.2	85.8	37.5	107.3
90	252	114	14.1	100.5	46.0	111.7
100	234	122	15.1	112.9	53.5	112.9
110	216	128	16.0	123.3	60.4	112.1
120	200	133	16.8	132.6	65.3	110.5
130	186	138	17.6	141.4	71.9	108.8
140	172	142	18.5	148.7	76.9	106.2
150	160	146	19.3	155.7	81.7	103.8
160	151	150	20.2	162.0	86.1	101.3

CHATHAM AREA
HIGH SITE
MANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height (feet)	Quadratic Mean Diameter (inches)	Merchantable C.F. Volume (100)	Merchantable B.F. Volume (1000)	Mean Annual Increment (net c.f.)
10	12618	10	0.4	0.0	0.0	0.0
20	386	21	2.7	0.1	0.0	0.5
30	386	37	5.3	2.2	0.1	7.3
40	379	55	7.7	8.1	2.6	20.3
50	355	72	9.5	22.9	7.5	45.8
60	315	86	11.0	42.9	15.9	71.5
70	287	98	12.3	65.7	27.4	93.9
80	269	107	13.2	83.0	36.7	103.8
90	253	116	14.2	98.5	45.5	109.4
100	238	123	15.1	113.0	53.8	113.0
110	221	129	16.0	121.8	59.5	110.7
120	202	134	16.8	130.2	64.9	108.5
130	190	139	17.5	138.7	70.4	106.7
140	179	143	18.2	145.6	75.4	104.0
150	167	147	18.9	147.8	79.7	98.5
160	157	151	19.7	157.8	83.7	98.6

KETCHIKAN HIGH
HIGH SITE
MANAGED EMPIRICAL YIELD TABLE

Age	Trees Per Acre	Dominate Tree Height	Quadratic Mean Diameter	Merchantable C.F. Volume	Merchantable B.F. Volume	Mean Annual Increment
----	-------	-------	--------	-------	-------	---------
		(feet)	(inches)	(100)	(1000)	(net c.f.)
10	4821	16	0.6	0.0	0.0	0.0
20	319	31	4.0	0.5	0.1	2.5
30	318	47	6.7	4.4	0.8	14.7
40	309	63	9.1	18.3	5.0	45.8
50	284	77	11.0	39.4	13.9	78.8
60	254	90	12.6	59.5	23.7	99.2
70	231	102	14.0	78.0	33.5	111.4
80	215	111	15.2	94.6	43.4	118.3
90	198	119	16.4	111.0	53.2	123.3
100	184	127	17.5	126.0	62.4	126.0
110	168	133	18.8	138.2	70.6	125.6
120	153	139	20.1	149.0	78.0	124.2
130	142	144	21.1	158.4	84.2	121.8
140	130	149	22.2	166.8	90.1	119.1
150	122	153	23.2	174.1	95.3	116.1
160	114	157	24.1	181.2	100.3	113.3

Appendix I

Fish Habitat and Water Quality LUD

APPENDIX I

Fish Habitat and Water Quality Requirements Land Use Designation

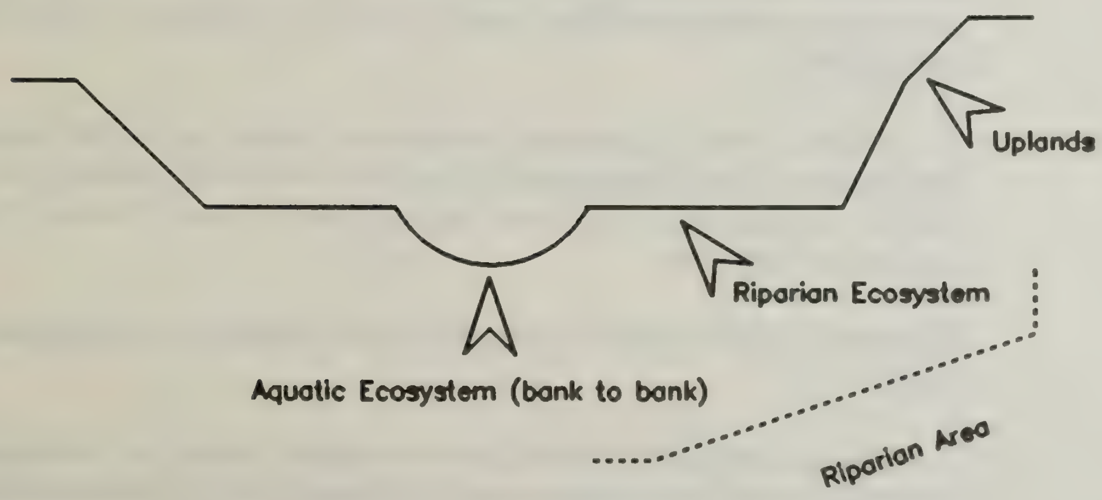
Note: This is the management prescription for the "riparian" land use designation (LUD) used for Alternative D in place of the Stream and Lake Protection LUD, which is used for the other alternatives. The management prescription for the latter may be found in the Proposed Revised Forest Plan, Chapter 3.

The emphasis of this land use designation is to meet the basic requirements for riparian areas, fish habitat, and water quality, as defined by: 1) the National Forest Management Act's implementing regulations (36 CFR 219.27(e)), 2) Section 103 of the Tongass Timber Reform Act, and 3) the Clean Water Act.

The National Forest Management Act states that no management practices causing detrimental changes in water temperature or chemical composition, blockages of watercourses, or deposits of sediment shall be permitted which seriously and adversely affect water conditions or fish habitat. The Tongass Timber Reform Act states that in order to assure protection of riparian habitat, a buffer zone of no less than one hundred feet width on each side of Class I streams and on those Class II streams which flow directly into Class I streams shall be maintained within which commercial timber harvesting shall be prohibited.

The Fish Habitat and Water Quality Requirements Land Use Designation is applied where, normally, more development-oriented management would otherwise occur. At a minimum, the land area encompassed by this designation includes: 1) the riparian area required to meet the National Forest Management Act's implementing regulations for fish habitat and water quality; and, 2) the land area in which the commercial timber harvest restrictions of the Tongass Timber Reform Act are applied.

Riparian-related definitions are indicated in the following schematic:



At-a-Glance . . .

Cultural Resources	Locate, evaluate and protect significant cultural resources. Interpretation may be provided when it is compatible with the management objectives for this land use designation.
Facilities	Facilities which are needed for the administration of the fish habitat and water quality requirements land use area and which do not result in a serious and adverse effect to fish habitat or water quality are permitted.
Fire	All fires are suppressed using a suppression action that minimizes fire suppression costs and minimizes the impact to water quality and fish habitat.
Fish	Fish habitat, including its maintenance and rehabilitation, is emphasized. This emphasis includes the management of riparian areas so that no serious and adverse effect occurs to stream banks, water quality, large woody debris, pools, and streambeds for resident and anadromous fish species and for downstream fisheries.
Forest Pests	Forest pest management principles are applied to maintain or improve forest health and the condition of the aquatic and riparian ecosystems.
Lands	Activities dependent upon the riparian area, and which meet the fish, wildlife and water quality objectives for riparian areas, may be present.
Minerals	Lands are open to mineral entry. Mineral management activities are designed to maintain the present and continued productivity of anadromous fish and other foodfish habitat to the maximum extent feasible.
Recreation	Management of recreation use prevents serious and adverse effects to riparian soils, stream banks, and wildlife and fish habitat. Recreation facilities that provide access to the water, such as trails and boat launch sites, may be constructed; other recreation facilities should generally be located outside the land use designation.
Soil and Water	Significant adverse impacts to the riparian habitat or soil and water resources are avoided. Best Management Practices are used to assure the protection of riparian habitat and to protect the beneficial uses of water from nonpoint sources of pollution.
Subsistence	Subsistence use occurs in accordance with applicable Federal and State regulations.
Timber	Commercial timber harvest shall be prohibited within no less than 100 feet of each side of all Class I streams and on those Class II streams which flow directly into Class I streams. In other areas, commercial timber harvest is allowed, provided that no serious and adverse effect to fish habitat or water quality would occur. Personal use woodcutting is compatible with this land use designation provided that management objectives are met. Cutting within 100 feet of Class I and tributary Class II streams is discouraged.

Transportation Transportation developments are located outside of the fish habitat and water quality requirements land use designation to the extent practicable. Developments should result in no serious and adverse effect on the production and migration of anadromous fish.

Visual Resource Visual quality may vary, based on the Visual Quality Objectives for the adjacent land use designation.

Wildlife Habitat for riparian-associated wildlife species benefits from management of the riparian area for no serious and adverse effect to fish habitat and water quality, as well as no timber harvest within 100 feet of Class I streams and Class II streams which flow directly into Class I streams.

Apply the following Forest-wide Standards & Guidelines (see Proposed Forest Plan, Chapter 4):

RESOURCE	SECTION	SUB-SECTIONS	PAGE #
AIR	AIR	All	4- 2
BIODIVERSITY	BIO	All	4- 3
CULTURAL	CULT	All	4- 8
FACILITIES	FAC	All	4-18
FIRE	FIRE12 FIRE2	All I(A,B);II(A)	4-19
FISH	FISH111,121,22,23 FISH112	All I;III-VI	4-20
FOREST PESTS	PEST	All	4-25
LANDS	LAND	All	4-26
LAW ENFORCEMENT	LAW	All	4-38
MINERALS, GEOLOGY, AND CAVES	MG&C,MG&C11 MG&C12	All II-VII	4-39
OLD-GROWTH FOREST	OLD	All	4-44
RECREATION	REC	All	4-45
RIPARIAN	RIP	All	4-60
RURAL DEVELOPMENT	RUR	All	4-61
SOIL AND WATER	S&W	All	4-62
SPECIAL INTEREST AREAS	SIA	All	4-65
SUBSISTENCE	SUB	All	4-66
THREATENED, ENDANGERED, SENSITIVE	TE&S11	All	4-68
TIMBER	TIM	All	4-72
TRAILS	TRAI	All	4-81
TRANSPORTATION	TRAN	All	4-84
VISUAL RESOURCE	VIS1 VIS11,12	I(A-D) All	4-92
WETLANDS	WET	All	4-97
WILDLIFE	WILD	All	4-98

Apply the following Land Use Designation Standards & Guidelines:

CULTURAL

Cultural Resource Activity: CULT

Inventory/Evaluation

A. Develop priorities and schedule management activities to implement cultural resource inventory, evaluation, protection, and interpretation within this land use designation.
   1. Identify, classify, and evaluate known cultural resources.
   2. Identify cultural properties to be nominated to the National Register of Historic Places.
   3. Identify cultural properties that require stabilization or other protective measures.
   4. Identify opportunities for interpretation of cultural resources for public education and enjoyment.

FACILITIES

Facilities Improvements: FAC2

A. Permit facilities which are needed for the administration of the fish habitat and water quality requirements land use designation and which do not have a serious and adverse effect on fish habitat or water quality.

FIRE

Fire Suppression: FIRE12

Suppression Action

A. Suppression Strategy

   All wildfires will be suppressed using the suppression option identified in the Southeast Alaska/Prince William Sound Fire Management Plan. An escaped fire situation analysis (EFSA) of expected fire behavior, time of year, and locations with respect to private land and adjacent land use areas, may lead to a lower strategy. If an EFSA discloses no adverse effects and it is more cost-efficient, the lower strategy will be used.

B. Suppression Tactics
   1. Tactics will emphasize the least possible disturbance or and minimize the impact to water quality.
   2. Erosion control measures to restore damage resulting from fire suppression activity will occur as soon as practical.

Fuel Improvements: FIRE2

Prescribed fire

A. Management Ignitions

   Treatment of fuels will be compatible with the standards and guidelines for this land use designation.

B. Natural Ignitions

   Will not be used in this land use designation.

FISH

Fish Habitat Planning: FISH112

A. Fish habitat, including its maintenance and rehabilitation, is emphasized. This emphasis will include the management of the riparian areas so that no serious and adverse effect occurs to stream banks, water

quality, large woody debris, pools, and streambeds for resident and anadromous fish species and for downstream fisheries considerations.

B. In addition, assure the protection of riparian habitat for fisheries purposes, as provided for in the Tongass Timber Reform Act (TTRA), by maintaining a buffer zone of no less than one hundred feet in width on each side of all Class I streams, and on those Class II streams which flow directly into a Class I stream, within which commercial timber harvesting shall be prohibited.

Objectives for Management Affecting Fish Habitat

A. Maintain or improve fish habitat capability in all channel process groups.
   1. *Stream Class I and in Class II streams the flow directly into Class I streams:* Allow no serious and adverse effects to anadromous and adfluvial fish habitat and high value resident sport fish habitat capability within each individual Class I stream system.
   2. *Stream Class II*: Allow no serious and adverse effects to resident fish species and downstream Class I stream systems.
   3. *Stream Class III*: Maintain water quality for downstream Class I and II stream systems. (This stream class has no fish.)
B. Maintain natural stream bank and stream channel processes.
   1. *Stream Class I and in Class II streams the flow directly into Class I streams*: Allow no serious and adverse effects to anadromous and adfluvial fish habitat and high value resident sport fish habitat capability by providing natural cover/pool ratios, pool-riffle sequences, and habitat features, such as stable large woody debris. Design management activities to maintain streambank, channel, and floodplain integrity.
   2. *Stream Class II*: Design management activities to maintain streambank, channel, and floodplain integrity. Avoid impacts to downstream Class I streams.
   3. *Stream Class III*: Design management activities to maintain streambank, channel, and floodplain integrity. Avoid impacts to downstream Class I and Class II streams.
C. Maintain natural and beneficial quantities of large woody debris (LWD) over the short and long-term.
   1. *Stream Class I and in Class II streams the flow directly into Class I streams:* Allow no serious and adverse effects to anadromous, adfluvial fish habitat and high value resident sport fish habitat capability by managing for natural and beneficial volumes of LWD for rearing and spawning, stream energy dissipation, and sources of organic matter and wood to the stream ecosystem. Use channel type biological and physical characteristics to determine size classes and distribution. (Note: As provided for in the Tongass Timber Reform Act, maintain a buffer zone of no less than one hundred feet in width on each side of all Class I streams within which commercial timber harvesting shall be prohibited.)
   2. *Stream Class II*: Maintain LWD, and design for future sources at volumes determined by channel type biological and physical characteristics, in order to provide for no serious and adverse effects to resident fish habitat capability. (Note: As provided for in the Tongass Timber Reform Act, maintain a buffer zone of no less than one hundred feet in width on those Class II streams which

flow directly into a Class I stream, within which commercial timber harvesting shall be prohibited.)

3. *Stream Class III*: Maintain LWD in channels and banks to prevent changes in natural stream bank and stream channel processes.

D. Maintain water quality to provide for fish production.

1. *Stream Classes I, II and III*: Prevent serious and adverse effects to rearing and spawning habitat, when present. Prevent adverse impacts to fish habitat downstream by minimizing siltation.
2. Implement applicable Best Management Practices (See Appendix C).

E. Maintain or rehabilitate water temperature at a level suitable for salmonid populations.

1. *Stream Class I and in Class II streams the flow directly into Class I streams:* Allow no serious and adverse effects to anadromous and adfluvial fish habitat and high value resident sport fish habitat capability by providing for summer stream temperatures below 68 degrees F, or at natural levels. Manage watersheds and riparian streamsides to attain favorable stream temperature regimes.
2. *Stream Class II*: Maintain water temperatures below 68 degrees F, or at natural levels, to provide no serious and adverse effects to resident fish species and to provide for downstream Class I streams.
3. *Stream Class III*: Manage riparian streamside vegetation to maintain water temperature standards and guidelines for downstream Class I and II streams.

F. Maintain or rehabilitate primary or secondary stream biological production in second-growth forests.

1. *Stream Class I and in Class II streams the flow directly into Class I stream*: Allow no serious and adverse effects to anadromous and adfluvial fish habitat and high value resident sport fish habitat capability by sustaining primary and secondary biological production in streams.
2. *Stream Class II*: Manage vegetation and biological productivity to provide for no serious and adverse effects to resident fish species and to maintain nutrient sources for downstream waters.
3. *Stream Class III*: Manage vegetation to provide maintenance of nutrient sources for downstream waters.

G. Maintain fish passage through stream crossing structures.

1. *Stream Class I and in Class II streams the flow directly into Class I streams*: Maintain or rehabilitate the opportunities for migration of adult and juvenile anadromous and adfluvial sport fish. Consult the Aquatic Habitat Management Handbook, FSH 2609.24.
2. *Stream Class II*: Where economically feasible maintain or rehabilitate the opportunities for the natural migration of resident fish. Consult the Aquatic Habitat Management Handbook, FSH 2609.24. Consult with the Alaska Department of Fish and Game whenever fish passage may be restricted.

3. *Stream Class III*: No fish are found in this stream class.

Improvement

A. Improvement of fish resources may occur in this land use designation.

FOREST PESTS

Forest Pest Management: PEST

A. Apply forest pest management principles to maintain or improve forest health and the condition of aquatic and riparian ecosystems.

Forest Pest Survey and Inventory: PEST122

A. Survey and inventory visible outbreaks annually.

LANDS

Special Use Administration (Non-Recreation): LAND122

A. Permit only those activities which are dependent upon riparian resources and do not significantly reduce the capability of the area to: (1) maintain fish or wildlife habitat, or (2) protect water quality for beneficial uses.
   1. Analyze new proposals on a case-by-case basis, using an interdisciplinary process, to determine probable effects.
   2. Apply Transportation Standards and Guidelines, when granting new rights-of-way.

B. This land use designation represents a Transportation and Utility System (TUS) "Avoidance Area." Transportation and utility sites and corridors may be located within this land use designation only after a search for TUS windows has been exhausted.

MINERALS
GEOLOGY
CAVES

Minerals and Geology Administration: MG&C12

Forest Lands Open to Mineral Entry

A. Forest lands within this land use designation are open to mineral entry.

B. Assure prospectors and claimants their right of ingress and egress granted under the General Mining Law of 1872, ANILCA, and National Forest Service Mining Regulations 36 CFR 228.

C. Permit reasonable access to mining claims in accordance with the provisions of an approved plan of operations.

Plan of Operations

A. Work with claimants to develop a plan of operations that adequately mitigates adverse impacts to land use designation objectives. Include mitigation measures that are compatible with the scale of proposed development and commensurate with potential resource impacts.

B. Apply appropriate Transportation Forest-wide Standards and Guidelines to the location and construction of mining roads.

C. Design mineral exploration and development activities to be compatible with the emphasis of this land use designation. Apply the following management practices to reduce resource impacts.
   1. Design mineral management activities to maintain the present and continued productivity of anadromous fish and other food fish habitat to the maximum extent feasible (consult ANILCA, Section 505 (a)).

2. Apply timing restrictions to in-stream construction as needed to protect fisheries habitat and mitigate adverse sedimentation.
3. Apply Best Management Practices to protect the beneficial uses of water from sources of non-point pollution associated with mineral development and related land-disturbing activities and National Pollutant Discharge Elimination System (NPDES) regulations for point pollution sources.
4. Locate material sites and marine transfer facilities outside this land use designation if reasonable alternatives exist.
5. Take advantage of topographic and vegetative screening when locating drill rigs and pumps, roads, rock quarries, structures, and marine transfer facilities.
6. Revegetate disturbed areas in accordance with project plans.
7. Design reclamation plans so minerals activities leave a natural appearing condition.

RECREATION

Recreation Use Administration: REC122

Recreation Management and Operations

A. Provide for inventoried ROS opportunities and appropriate activities throughout this land use designation, unless areas within the land use designation are specifically closed to public use. Where the ROS setting is changed by project implementation manage the recreation resource in accordance with the created ROS conditions.
   1. Locate, design, and operate only those recreation facilities in this land use designation which are necessary to accommodate public use of the water and shoreline areas (i.e., boat or floatplane docks, launching ramps and associated access roads and trails). Locate parking, sanitation and other recreation facilities outside the land use designation where practical. Design all facilities within the land use designation to avoid serious and adverse effects on water quality and riparian shorelines.
   2. For existing facilities, consider relocating the facility outside of the Fish Habitat and Water Quality Requirement land use designation. Consideration should be based on current and anticipated effects on riparian values, public issues, application of Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with recreation facilities, and costs of relocating the facility.

SOIL AND WATER

Soil Inventory: S&W1111

A. Verify and define riparian areas on the ground during project level planning.

Watershed Resource Planning: S&W112

A. Manage activities to protect the beneficial uses of water from nonpoint sources of pollution and to protect the aquatic and terrestrial riparian habitats, channel and streambanks, and promote floodplain stability.
   1. Identify soil and water quality requirements during the environmental analysis for project-level activities.

2. Apply Best Management Practices to protect the beneficial uses of water from all land-disturbing activities.
3. Determine floodplain values and plan to avoid, where possible, the long and short-term adverse impacts to soil and water resources associated with the occupancy and modification of floodplains.

TIMBER

Timber Resource Planning: TIM112

A. Timber land is classified as unsuitable within 100 feet slope distance on each side of Class I streams and within 100 feet slope distance of Class II streams which flow directly into Class I streams. Best Management Practices, as defined in the Region 10 Soil and Water Conservation Handbook (FSH 2509.22), shall be used on all other streams to assure the protection of riparian habitat. (Consult ANILCA, Sction 705, as amended by the Tongass Timber Reform Act.
   1. Apply Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with timber harvest and related land-disturbing activities.
B. Personal use woodcutting is compatible with this land use designation provided that management objectives are met. Cutting within 100 feet of Class I and tributary Class II streams is discouraged.

Timber Resource Coordination: TIM113

A. Emphasize the maintenance and rehabilitation of riparian-associated resources in the analysis, development of environmental documents, and project design for timber activities.
B. The Sale Area Improvement Plan will prioritize K-V funds. Reforestation will have highest priority for funds; other land use designation objectives will be lower priorities.

Timber Sale Preparation: TIM114

A. Location and design of timber harvest activities require special consideration to ensure that riparian area characteristics for fish habitat and water quality are maintained. This can be accomplished with both even-aged and uneven-aged silvicultural systems.
B. When stream crossings are required to harvest timber, perform site-specific investigations to determine the environmental impacts associated with constructing road crossings versus allowing yarding corridors across the riparian area. Tailholds may also be allowed on a case-by-case basis if land use designation objectives are met. During design and implementation of any activities within 100 feet in width on each side of Class I streams, and Class II streams which flow directly into Class I streams, do not cause significant adverse impact to the riparian habitat.
C. Plan timber harvest settings that cross or include streamcourses or include V-notches to avoid significant adverse impacts to the riparian habitat or the soil and water resources. Unless stated otherwise in the Process Group direction, the following apply:
   1. Trees or products yarded across or along streamcourses shall be fully suspended when crossing the streamcourse or yarding the full length of the stream or drainage, unless alternatives are devel-

oped in the Operating Plan or timber sale contract which meet the objectives of this land use designation.

2. Unless agreed otherwise in the Operating Plan or timber sale contract, and consistent with safe practices, trees identified for harvest should be felled so that they do not fall within a "no commercial timber harvest" area (within this land use designation) or within a streamcourse. These trees may be wedged, jacked, lined, or otherwise pulled away from the stream, when necessary. Trees accidentally felled or windfallen trees in streamcourse shall be removed following approval of the Sale Officer only, and only in a manner consistent with the protection of the streamcourse and riparian area.
3. At the time agreed in the operating plan or timber sale contract, all trees, except those within guyline circles, which cannot be felled avoiding in streamcourses shall be left standing until yarding is in progress on the landing to which the trees will be yarded. Trees within the guyline circle will be felled as agreed in the operating plan or timber sale contract.
4. Split yard away from streams whenever possible.
5. Interdisciplinary review of sale unit layout during planning should evaluate potential consequences of alternatives for cutting or leaving trees in V-notches. Among factors which should be considered are soil, watershed, and other resource information, blowdown potential, and yarding capability.
6. Allow salvage of material if objectives of this land use designation can be met. Although salvage is allowed in all process groups and stream classes, normally there will be no salvage within 100 feet in width on each side of Class I streams or within 100 feet of Class II streams which flow directly into Class I streams. Salvage within 100 feet each side of Class I and II streams should only be considered in order to maintain or protect resources within the fish habitat and water quality area; salvage in these areas does not contribute to the Allowable Sale Quantity.

D. The following tables provide the standards and guidelines for timber harvest activities. Distances are in slope distance measured from the ordinary high water mark (See glossary). Distances shown are for windfirm leave strips; greater distance may be required to achieve reasonable assurance that windthrow as a result of adjacent harvest activity will not occur within the windfirm distance. To design windfirm leave strips, consider conditions such as soils, local wind patterns, tree height and size, and other site-specific factors. Forest-wide and land use designation-wide standards & guidelines apply for each group.

1. See the following charts -

   (Special definitions for the charts: Where the standards state "no commercial timber harvest," this means that commercial timber harvest shall be prohibited (Tongass Timber Reform Act of 1990). Where the standards state "no programmed commercial timber harvest," this means that no timber harvest will be scheduled, but that unprogrammed commercial timber harvest could be allowed. Among other reasons, unprogrammed commercial timber harvest may include timber sold as part of a salvage sale, for insect and disease abatement purposes, and for specialty wood products.)

Fish Habitat and Water Quality Requirements
Low Gradient Floodplain Process Group
(Channel types B1, B8, C1, C3, C4, C6, D4, D5, D8)

Stream Class

	I
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Maintain long-term supply of woody debris sources within the process group - Allow no activities which may cause floodplain destabilization
Harvest Control	- Allow no commercial timber harvest within 100 feet of all channels types - Consider all harvest methods, on a case-by-case basis, in the riparian area beyond 100 feet of B1 or B8 channel types not associated with other channel types - Allow no programmed commercial timber harvest within 100 to 200 feet for remainder of channel types - Consider all harvest methods, on a case-by-case basis, in the riparian area beyond 200 feet if the riparian area is greater than 200 feet
Harvest Rate	- Beyond 100' from the stream, strive to maintain 90% of the normal basal area with trees 16"+ dbh within areas with no programmed commercial timber harvest (See note below)
Salvage	- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas while meeting objectives
Roading	- Locate roads in this area only when other reasonably feasible routes do not exist

NOTES:

- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.
- Commercial timber harvest guidelines beyond 100 feet may vary, based on site-specific analysis, in order to meet process group objectives.
- Beyond 100 feet of the stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g., for bridge stringers, totem poles, etc.).
- Stream Classes II and III do not normally occur in this process group. If they should occur, harvest control must meet management objectives for Class II and III of the Alluvial Fan Process Group.

Fish Habitat and Water Quality Requirements
Alluvial Fan Process Group
(Channel types A3, B5, D1, D6)

Stream Class

	I	II	III
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or resident fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no activities which may cause floodplain destabilization - Apply Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with timber harvest and related land disturbing activities
Harvest Control	- Allow no commercial timber harvest within active portion of fan or 100 feet of channel, whichever is greater - All harvest methods are available on remaining inac tive portion of fan while meeting objectives	- Allow no commercial timber harvest within active portion of fan or 100 feet of channel, whichever is greater, if the stream flows directly into a Class I stream (25 feet if not tributary to a Class I stream). - Allow no programmed commercial timber harvest within active portion of fan or 25 feet of streambank, whichever is greater, if not flowing directly into a Class I stream - All harvest methods are available on remaining inact ive portion of fan while meeting objectives	- Allow no programmed com mercial timber harvest with in active portion of fan or 25 feet of streambank, whichever is greater - All harvest methods are available on remaining inactive portion of fan while meeting objectives
Salvage	- Allow no salvage in the no commercial timber harvest area unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas while meeting objectives		- Allow salvage in all areas while meeting objectives
Roading	- Anticipate stream meandering in determining the feasibility and/or most practical road locations, stream crossings, and design.		

NOTES:
- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, commercial timber harvest guidelines may vary, based on site-specific analysis, in order to meet process group objectives.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g. for bridge stringers, totem poles, etc.).

Fish Habitat and Water Quality Requirements
Mixed Controlled Moderate Gradient Process Group
(Channel types B2, B3, D3)

Stream Class

	I	II	III
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or resident fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no activities which may cause floodplain destabilization - Apply Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with timber harvest and related land disturbing activities
Harvest Control	- Allow no commercial timber harvest within 100 feet of channels. - All harvest methods are available on remaining area while meeting objec tives	- Allow no commercial timber harvest within 100 feet in width on each side which flow directly into Class I streams. For other streams, allow single tree selection harvest within 25 feet of channels. - All harvest methods are available on remaining area while meeting objectives	- Allow single tree selection within 25 feet of B2 chan nels - All harvest methods are available on remaining area while meeting objectives
Harvest Rate	- Forest-wide Standards and Guidelines apply		
Salvage	- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas while meeting objectives		- Allow salvage in all areas while meeting objectives
Roading	- Special road construction techniques may be required to ensure fish passage		

NOTES:

- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, commercial timber harvest guidelines may vary, based on site-specific analysis, in order to meet process group objectives.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g. for bridge stringers, totem poles, etc.).

Fish Habitat and Water Quality Requirements
Large Low Gradient Contained Process Group
(Channel types C2, C5)

Stream Class

	I	II
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or resident fish habitat - Allow no activities which may cause flood plain destabilization
Harvest Control	- Allow no commercial timber harvest within 100 feet - All harvest methods are available on remain ing area while meeting objectives - Full suspension yarding is required to cross stream channel	- Allow no commercial timber harvest within 100 feet in width on each side which flow directly into Class I streams - Allow no programmed commercial timber harvest within 25 feet of other streams - All harvest methods are available on remain ing area while meeting objectives - Minimize soil disturbance associated with yarding within inner gorge - Full suspension yarding is required to cross stream channel
Harvest Rate	- Allow no programmed timber harvest	- Forest-wide Standards and Guidelines apply
Salvage	- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas while meeting objectives	
Roading	- Road construction is generally not appropriate in this process group; where road crossings are required, minimize erosion and sedimentation associated with road crossing approaches within inner gorge	

NOTES:

- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, commercial timber harvest guidelines may vary, based on site-specific analysis, in order to meet process group objectives.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g. for bridge stringers, totem poles, etc.).
- Stream Class III does not normally occur in this process group. If it should occur, Harvest Control must meet Management Objectives for Class III of the Moderate Gradient Contained Process Group.

Fish Habitat and Water Quality Requirements
Moderate Gradient Contained Process Group
(Channel types B4, B6, B7)

Stream Class

	I	II	III
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or resident fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no activities which may cause floodplain destabilization - Apply Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with timber harvest and related land disturbing activities
Harvest Control	- Allow no commercial timber harvest within 100 feet - Minimize soil disturbance associated with yarding within the inner gorge - Full suspension yarding required to cross stream channel	- Allow no commercial timber harvest within 100 feet in width on each side which flow directly into Class I streams - Selectively leave trees with crowns that do not extend above the slope break along streams which do not flow directly into Class I streams - Minimize soil disturbance associated with yarding within inner gorge - Full suspension yarding required to cross stream channel	- All harvest methods are available while meeting objectives - Minimize soil disturbance associated with yarding within inner gorge
Harvest Rate	- Forest-wide Standards and Guidelines apply		
Salvage	- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas while meeting objectives		
Roading	- Road construction is generally not appropriate in this process group; where road crossings are required, minimize erosion and sedimentation associated with road crossing approaches within the inner gorge		

NOTES:

- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed, but will be limited to uneven-aged silvicultural systems.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, commercial timber harvest guidelines may vary, based on site-specific analysis, in order to meet process group objectives.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g. for bridge stringers, totem poles, etc.).

Fish Habitat and Water Quality Requirements
High Gradient Contained Process Group
(Channel types A1, A2, A4, A5, A6, A7, D2, D7)

Stream Class

	III
Objectives	- Assure the protection of riparian habitat - Allow no activities which may cause floodplain destabilization - Apply Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with timber harvest and related land disturbing activities
Harvest Control	- Allow harvest to streambank while meeting objectives - Full suspension required to cross stream channel
Harvest Rate	- Forest-wide Standards and Guidelines apply
Salvage	- Allow salvage while meeting objectives

NOTES:
- Timber harvest guidelines may vary, based on site-specific analysis, in order to meet process group objectives.
- Stream Classes I and II do not normally occur in this process group. If they should occur, Harvest Control must meet Management Objectives for Class I and II of the Moderate Gradient Contained Process Group.

Fish Habitat and Water Quality Requirements
Placid or Glide Streams Process Group
(Channel types L1, L2)

Stream Class

	I	II
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Allow no activities which may cause floodplain destabilization	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or resident fish habitat - Allow no activities which may cause floodplain destabilization
Harvest Control	- Allow no commercial timber harvest within 100 feet - Allow single tree selection harvest if the area extends beyond 100 feet	- Allow no commercial timber harvest within 100 feet in width on each side which flow di rectly into Class I streams - Allow single tree selection harvest along other streams and, for all streams, beyond 100 feet - Where timber harvest is permitted, allow only non-ground disturbing methods of timber harvest within 60 feet of streambank (e.g., helicopter logging is acceptable)
Harvest Rate	- Forest-wide Standards and Guidelines apply	
Salvage	- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas, adhering to the harvest control standards and guidelines	
Roading	- Roading is generally not appropriate in this process group	

NOTES:

- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, commercial timber harvest guidelines may vary, based on site-specific analysis, to meet process group objectives.
- Except within 100 feet of a Class I stream and 100 feet of a Class II stream which flows directly into a Class I stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g. for bridge stringers, totem poles, etc.).
- Stream Class III does not normally occur in this process group. If it should occur, Harvest Control must meet Management Objectives for Class III of the Moderate Gradient Contained Process Group.

Fish Habitat and Water Quality Requirements
Lakes and Ponds Process Group
(Channel types L, L3, L4, L5)

Stream Class

<table>
<tr><th></th><th>I</th><th>II</th><th>III</th></tr>
<tr><td>Objectives</td><td>- Assure the protection of riparian habitat
- Allow no serious and adverse effect on water quality or fish habitat</td><td>- Assure the protection of riparian habitat
- Allow no serious and adverse effect on water quality or resident fish habitat</td><td>- Assure the protection of riparian habitat
- - Apply Best Management Practices to protect the beneficial uses of water from nonpoint sources of pollution associated with timber harvest and related land disturbing activities</td></tr>
<tr><td>Harvest Control</td><td>- Allow no commercial timber harvest within 100 feet
- Any harvest method applies for remainder of area while meeting objectives</td><td>- Allow no commercial timber harvest within 100 feet of lakes, ponds and channels which: 1) flow directly into a Class I stream, or 2) flow into a Class II stream which flows directly into a Class I stream
- For other water bodies, maintain a minimum of 65% of natural shading vegetation for temperature sensitive lakes, ponds or channels
- Any harvest method applies for remainder of area while meeting objectives
- Except for lakes, ponds, or channels which flow directly into a Class I stream, treat as the adjacent land use designation if lake or pond is less than 5 acres</td><td>- Maintain a minimum of 50% of natural shading vegeta tion for temperature sensi tive lakes, ponds or channels
- Any harvest method applies for remainder of area while meeting objectives
- Treat as the adjacent land use designation if lake or pond is less than 5 acres</td></tr>
<tr><td>Harvest Rate</td><td colspan="3">- Forest-wide Standards and Guidelines apply</td></tr>
<tr><td>Salvage</td><td colspan="2">- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams)
- Allow salvage in other areas while meeting objectives</td><td>- Allow salvage in all areas while meeting objectives</td></tr>
<tr><td>Roading</td><td colspan="3">- Roads may be allowed if other practical alternatives are not available, or if needed to access the water body for recreation or other needs</td></tr>
</table>

NOTE: - A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.

- Except within 100 feet of a Class I lake, pond, or channel and 100 feet of a Class II lake, pond, or channel which flows directly into a Class I lake, pond, or channel, commercial timber harvest guidelines may vary, based on site-specific analysis, in order to meet process group objectives.
- Except within 100 feet of a Class I lake, pond, or channel and 100 feet of a Class II lake, pond, or channel which flows directly into a Class I lake, pond, or channel, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g. for bridge stringers, totem poles, etc.).

Fish Habitat and Water Quality Requirements
Estuarine Process Group

(Channel types E1, E2, E3, E4, E5)

Stream Class

	I
Objectives	- Assure the protection of riparian habitat - Allow no serious and adverse effect on water quality or fish habitat - Allow no activities which may cause floodplain destabilization
Harvest Control	- Allow no commercial timber harvest within 100 feet - Allow no programmed commercial timber harvest within 100 to 200 feet of E1 and E5 estuarine channels, or the extent of the land use designation, whichever is less - Any harvest methods applies for remainder of area while meeting objectives
Harvest Rate	- Beyond 100' from the stream, strive to maintain 90% of the normal basal area with trees 16"+ dbh within areas with no programmed commercial timber harvest (see note below)
Salvage	- Allow no salvage in the no commercial timber harvest areas unless needed to meet process group objectives (e.g., windthrown trees restricting fish passage in streams) - Allow salvage in other areas while meeting objectives
Roading	- Juvenile fish passage may require special attention - Generally, no roading should occur in estuarine wetland areas

NOTES:

- A primary consideration for timber harvest within the Land Use Designation is to maintain windfirmness of the unharvested trees. Where additional distance is required to provide for reasonable assurance of windfirmness, harvest may be allowed but will be limited to uneven-aged silvicultural systems.
- Commercial timber harvest guidelines beyond 100 feet may vary, based on site-specific analysis, in order to meet process group objectives.
- Beyond 100 feet of the stream, incidental cutting of trees may be allowed in areas not programmed for commercial timber harvest on a case-by-case basis (e.g., for bridge stringers, totem poles, etc.).
- Stream Classes II and III do not normally occur in this process group. If they should occur, Harvest Control must meet Management Objectives for Class II and III of the Lakes and Ponds Process Group.

TRANSPORTATION **Transportation Operations: TRAN1**

A. Locate, design, and construct roads in a manner which will minimize effects on wildlife and fish habitat and populations. Conduct development activities on wetlands and floodplains in compliance with Executive Orders 11988 and 11990 (Floodplain Management and Protection of Wetlands). Consult the Forest Service Road Preconstruction and Drainage Structures Handbooks and the Region 10 BMP Handbook for detailed location and design guidance.

1. Develop and incorporate an erosion control and stabilization plan for stabilizing all human-caused soil disturbances in project plans.
2. Locate stream crossings only in stable stream reaches, unless mitigation measures are taken. Design crossings of V-notched drainages to prevent debris jamming. Culverts will be designed and installed to prevent downstream erosion and sedimentation. When embankment material is used for decking on native log bridges, install side logs, wood chinking, and a woven or polypropylene fabric blanket prior to embankment placement to contain surfacing materials and prevent entry of sediment into the stream.
3. Permit location of roads parallel to fish bearing streams and crossing fish streams only where other locations are not feasible and the management direction for fish habitat can be met. Where roads are located near fish streams, minimize the introduction of sediment during clearing, construction and operation activities. Sidecasting and waste materials must not encroach upon the streamcourse and as much undisturbed groundcover as possible shall be left between the road and the stream. Complete endhaul of waste material will be required where roads are located near fish streams when there is the probability of downhill movement of the material into the stream below. Fill will be placed into fish streams only when considered to be the best alternative through the IDT process.
4. Meet fish passage management direction at all locations where roads cross fish streams (Consult Forest-wide Standards and Guidelines for fish habitat planning, FISH112). Contracts will specify permissible uses of heavy machinery and the timing of road construction activities based on consultation with the Alaska Department of Fish and Game and as determined by interdisciplinary analysis and appropriate line officer approval.
5. Slope drainage ditches along the road-bed with reasonable consistency to the nearest relief culvert and avoid leading directly into stream channels.
6. Design bridge abutments to minimize disturbances to streambanks.
7. Avoid location of roads parallel to riparian areas or within riparian areas with known concentrations of wildlife such as brown bear or high use waterfowl areas.
8. Consult with the Alaska Department of Fish and Game on: (a) timing instream activities that affect anadromous fish; (b) location of stream crossings that affect anadromous fish; and (c) activities that will result in barriers to fish movement.

B. If the need to restrict access is identified during project interdisciplinary team review, roads may be closed, either seasonally or yearlong, to minimize adverse effects on fish and wildlife. To the extent practicable, manage road use in cooperation with appropriate State and other Federal agencies to meet fish and wildlife population management objectives.

VISUAL RESOURCE

Visual Resource Operations: VIS1

A. A variety of visual conditions may exist within this land use designation.
   1. Adopt the Visual Quality Objective of the adjacent land use designation.
   2. Visual Quality Objectives may range from Retention to Maximum Modification.

WILDLIFE

Wildlife Habitat Inventory: WILD111

A. Establish, or use existing baseline inventories of riparian wildlife habitats to obtain information on habitat conditions and wildlife use prior to planned management activities.
   1. Coordinate with, utilize and incorporate existing and/or ongoing inventory work and techniques such as plant association inventories, soil inventories, timber stand exams, USFWS inventories, and ADF&G inventories.
   2. Conduct baseline inventories, if needed, on highest priority areas to precede or coincide with proposed management activities.

Wildlife Habitat Planning: WILD112

A. Coordinate management activities with the needs of wildlife.
   1. Use the habitat needs of MIS to help identify important resource considerations.
   2. Allow for the migration and movement of wildlife along riparian areas.
   3. When practical, use silvicultural techniques which prolong understory forb and shrub production.
   4. Provide habitat for cavity-nesting wildlife species.
      * Retain soft and hard snags where possible, while meeting management objectives, considering safety needs for people and equipment.
      * Where possible, save both hard and soft snags in areas protected from wind.
      * Snags do not need to be evenly distributed; clumped distributions are preferred.
      * Favor saving snags away from roads to reduce loss from firewood gathering activity and for public safety.
      * After harvest, designate snags as wildlife trees and mark them illegal for cutting, except where they are a threat to human safety.
      * Consider retaining live trees for future snag recruitment.
   5. Maintain or rehabilitate wetland habitats associated with this land use designation which receive high use by waterfowl species such as ducks, geese and shorebirds (Refer to Forest-wide Standards & Guidelines for Wildlife - Waterfowl).

B. Coordinate road management to emphasize the needs of wildlife.
   1. Locate and design roads in riparian areas to minimize human disturbance to wildlife, with particular emphasis being given to brown bear habitat.
   2. Utilize road management, including year-long or seasonal closures, where necessary, to reduce human disturbance of wildlife. Particular emphasis needs to be given to road management in important brown bear riparian habitats.

Appendix J

Minerals Analysis

APPENDIX J - MINERALS ANALYSIS

Appendix J is in two parts. The first part displays alternative effects on the 52 mineral activity tracts; the second part is a discussion of the methodology and scientific accuracy for the minerals analysis.

EFFECTS OF ALTERNATIVES

Displayed here are the effects of alternative implementation for each of the 52 mineral activity tracts on the Tongass National Forest. A loction map of all 52 mineral activity tracts is provided, followed by a pie chart for each alternative for each tract. The alternatives are listed at the top of each page, and the mineral activity tracts are listed by number at the left. The acres of each tract are listed in the minerals section of Chapter 3. Each pie chart represents 100 percent of the acres for each tract. A legend along the bottom of each page includes shading and symbols defined here:

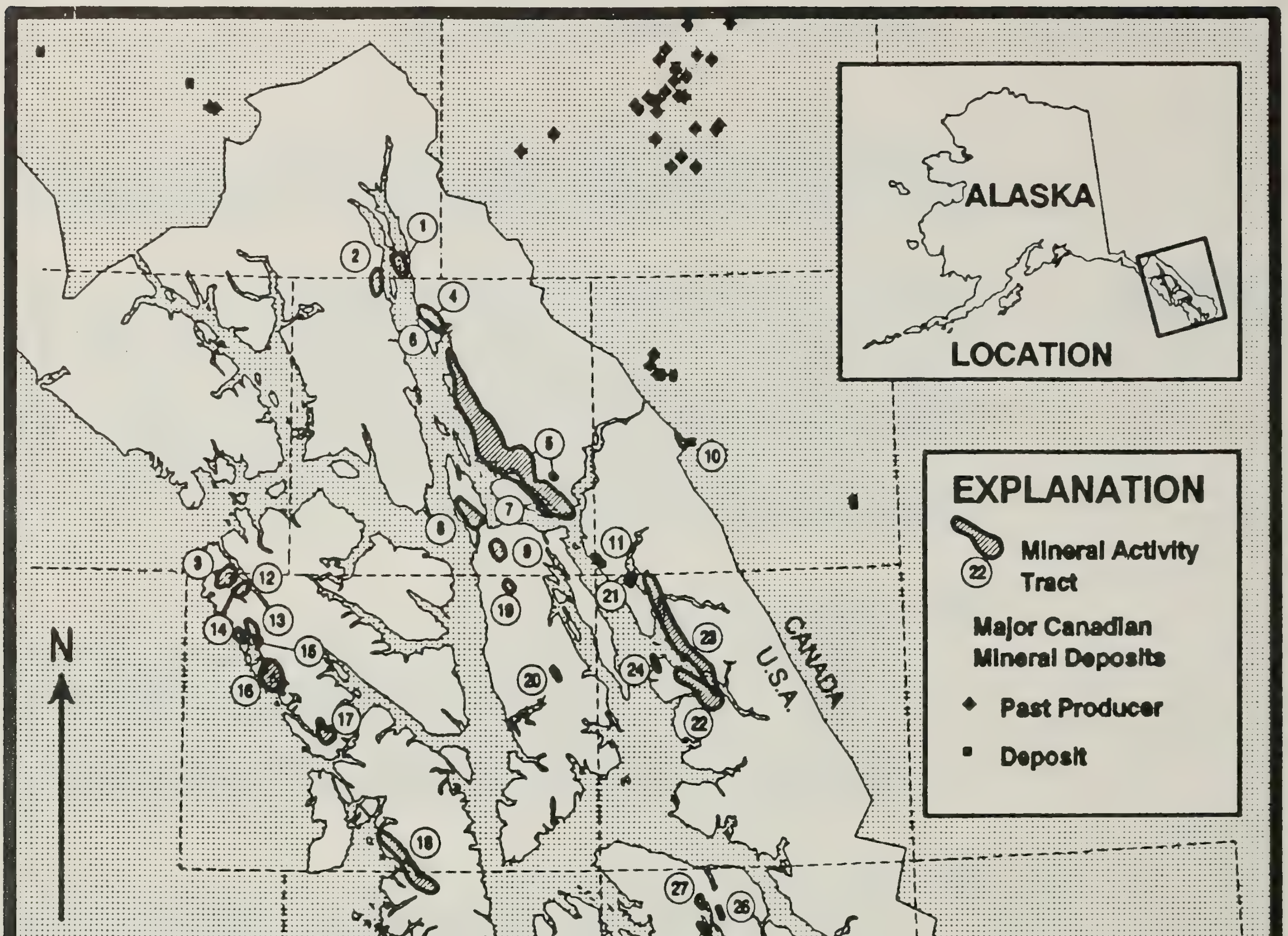
EW **Existing Withdrawal**
Lands already withdrawn from mineral entry. Valid existing rights will be determined and recognized. Land Use Designations (LUD's) which are withdrawn from mineral entry are Wilderness, Wilderness National Monument, Non-Wilderness National Monument, Research Natural Areas, and Enacted Municipal Watersheds. As of 1991 there are no lands withdrawn for Wild River segments.

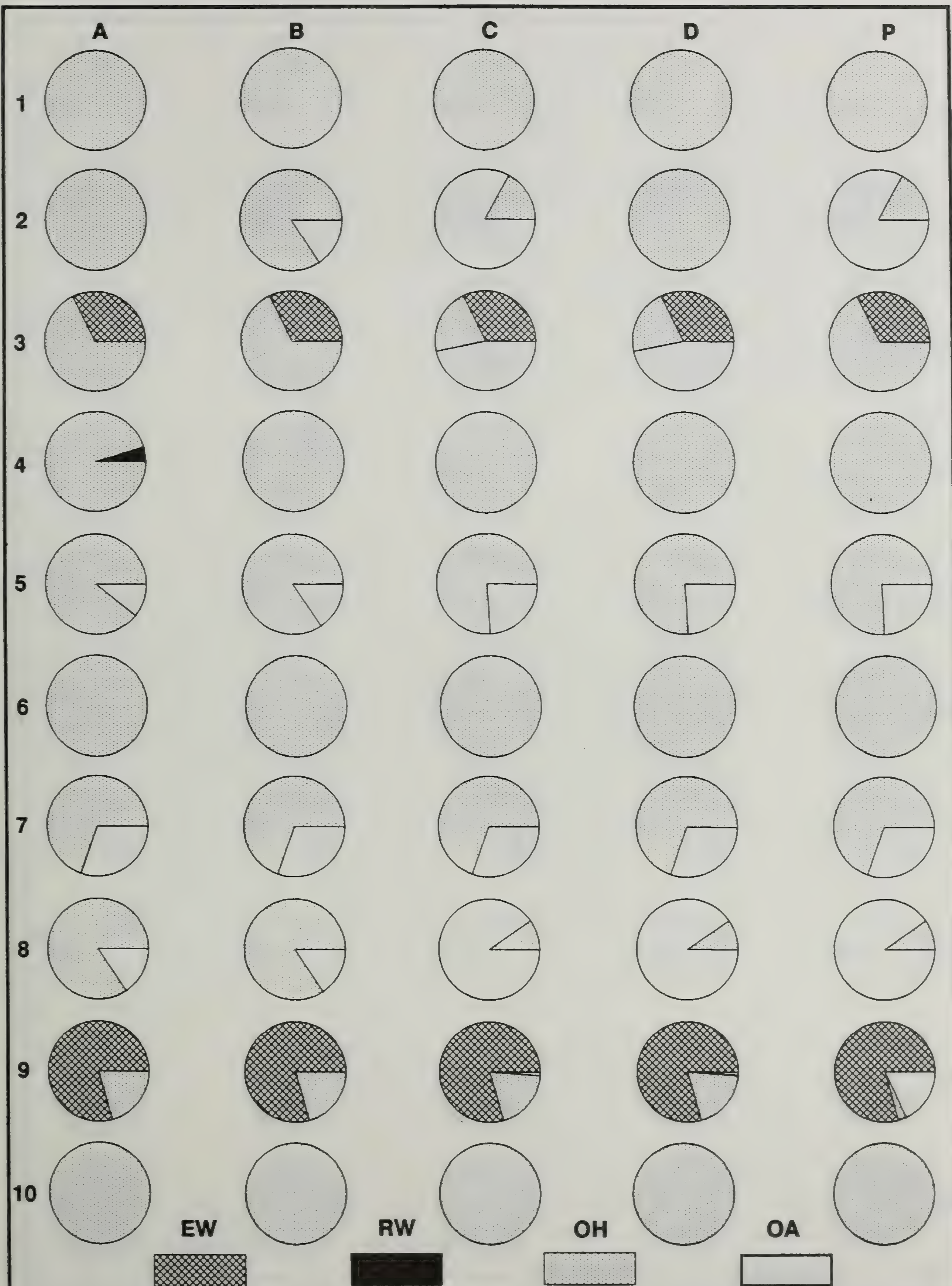
RW **Recommended Withdrawal**
Lands proposed for withdrawl from mineral entry. Valid existing rights will be determined and recognized. LUD's which will be withdrawn from mineral entry are Research Natural Areas, Wild Rivers and some Special Interest Areas.

OH **Open: High Operating Costs**
Lands are open to mineral entry, however periods of operation may be restricted, special stipulations and mitigation measures will be applied, and some areas will be recommended for withdrawal from mineral entry to protect surface resources for which the management area was established. Operating costs will generally be greater than areas allocated to LUD's with average operating costs. LUD's with high operating costs are Beach Fringe and Esturary, Primitive Recreation, Old-Growth Habitat, Semi-primitive Recreation, LUD II, Other Areas, Experimental Forests, Stream and Lake Protection, some Special Interest Areas, and Scenic Rivers.

OA **Open: Average Operating Costs**
Lands are open to mineral entry. Mitigation measures and stipulations may be applied. Operating costs will average less than areas allocated to LUD's with high operating costs. LUD's with average operating costs are Scenic Viewshed, Modified Landscape, Recreation Rivers, Minerals and Timber Production.

LOCATION OF THE 52 MINERAL ACTIVITY TRACTS

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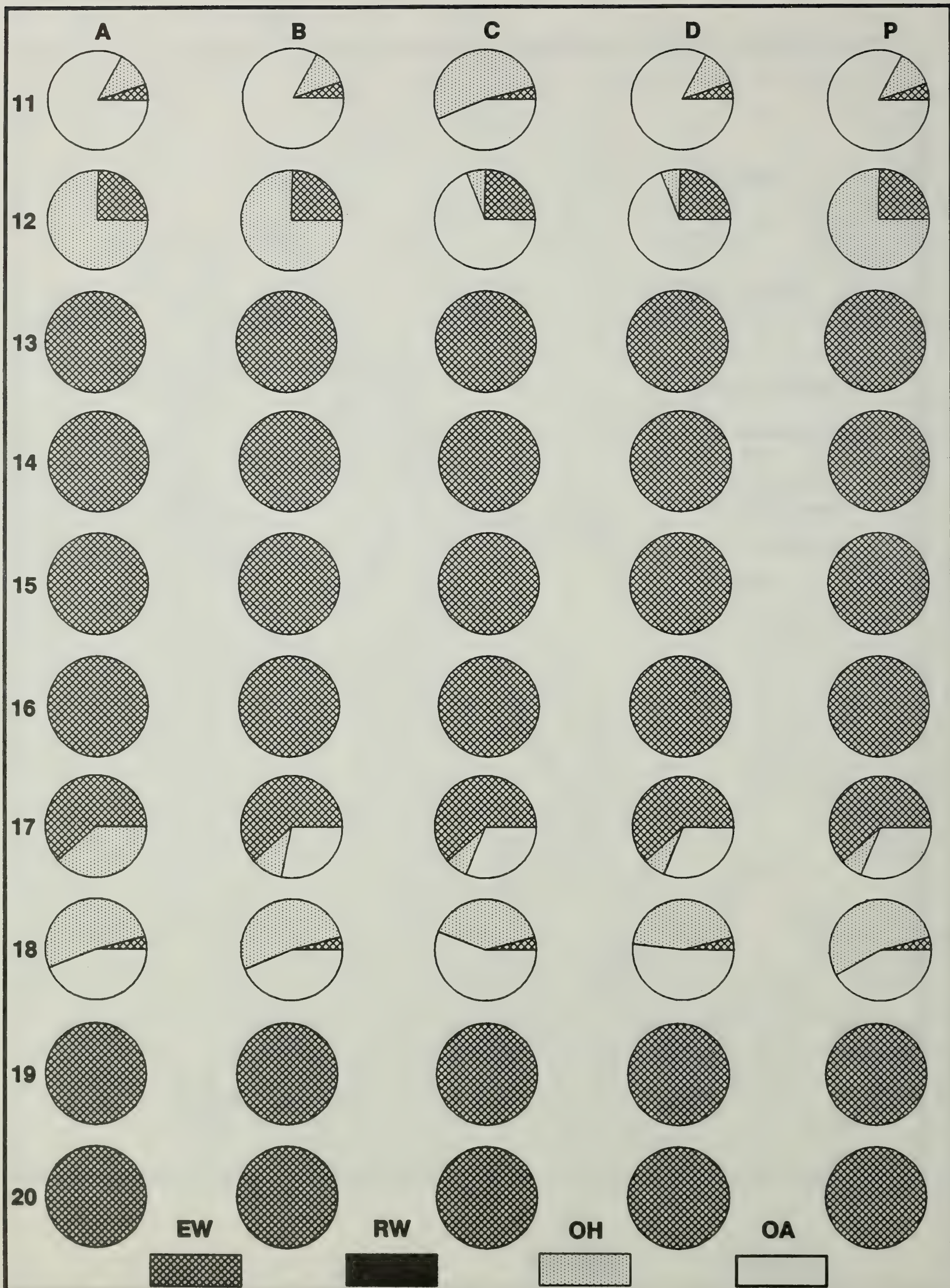
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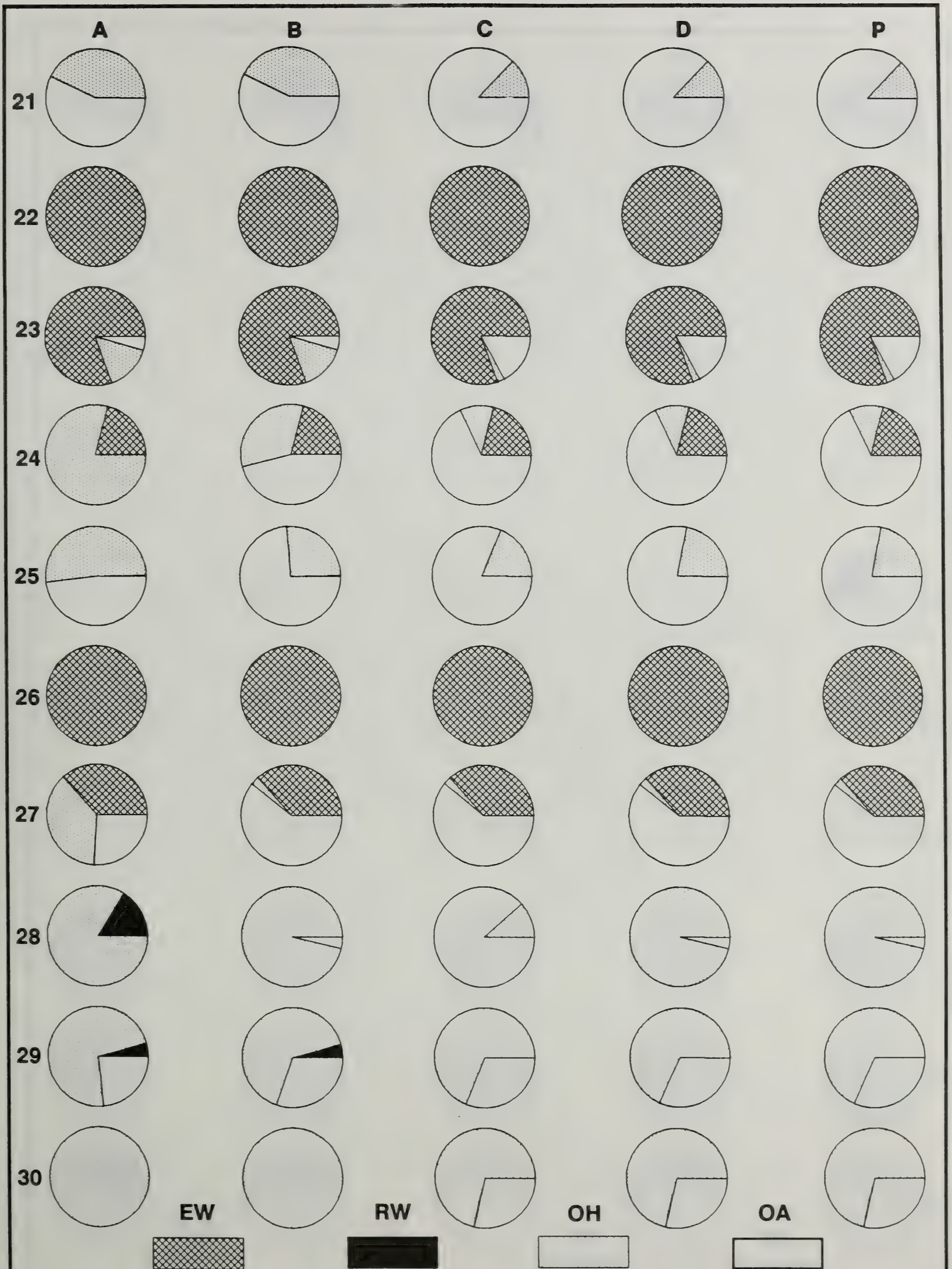
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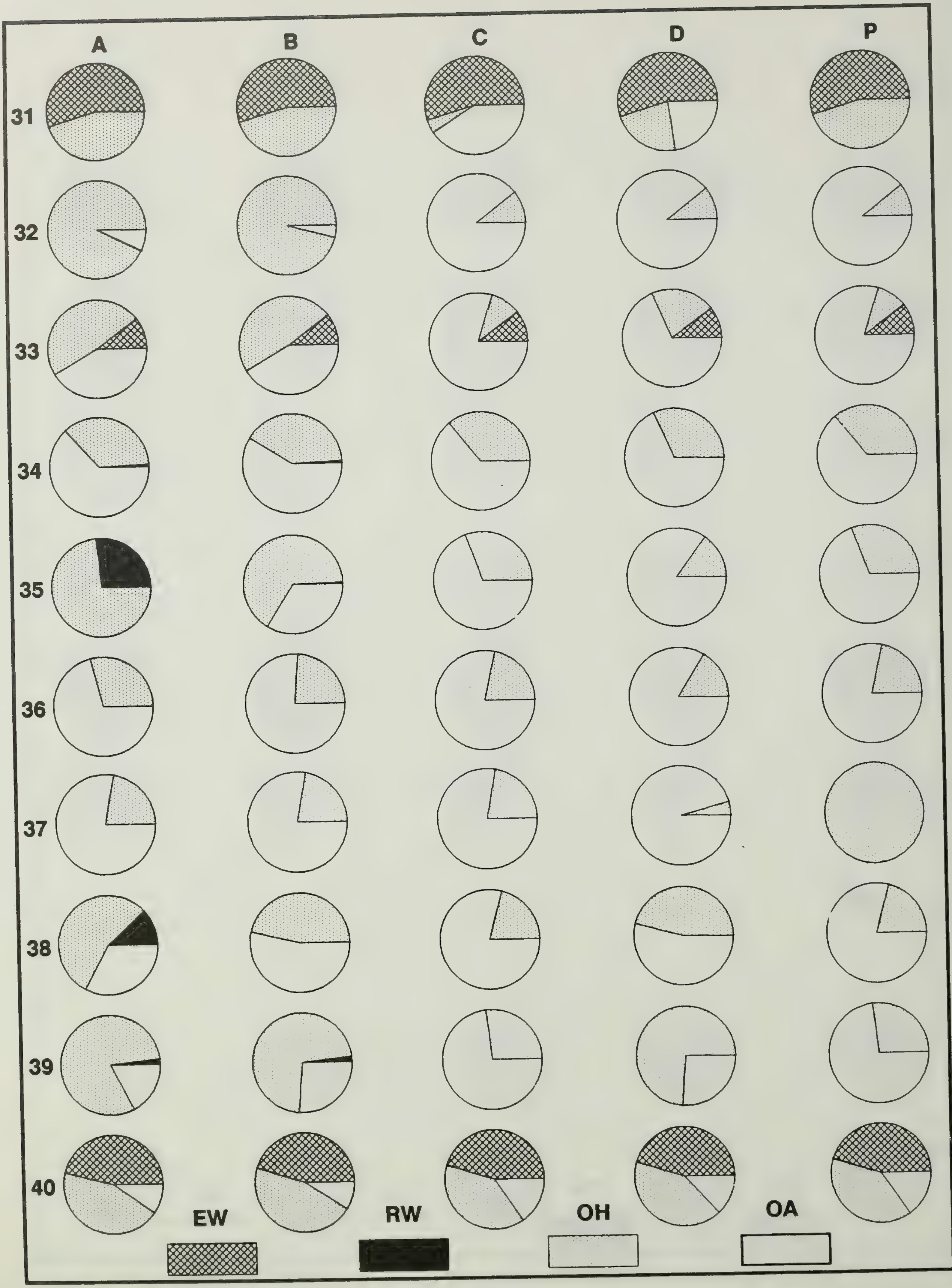
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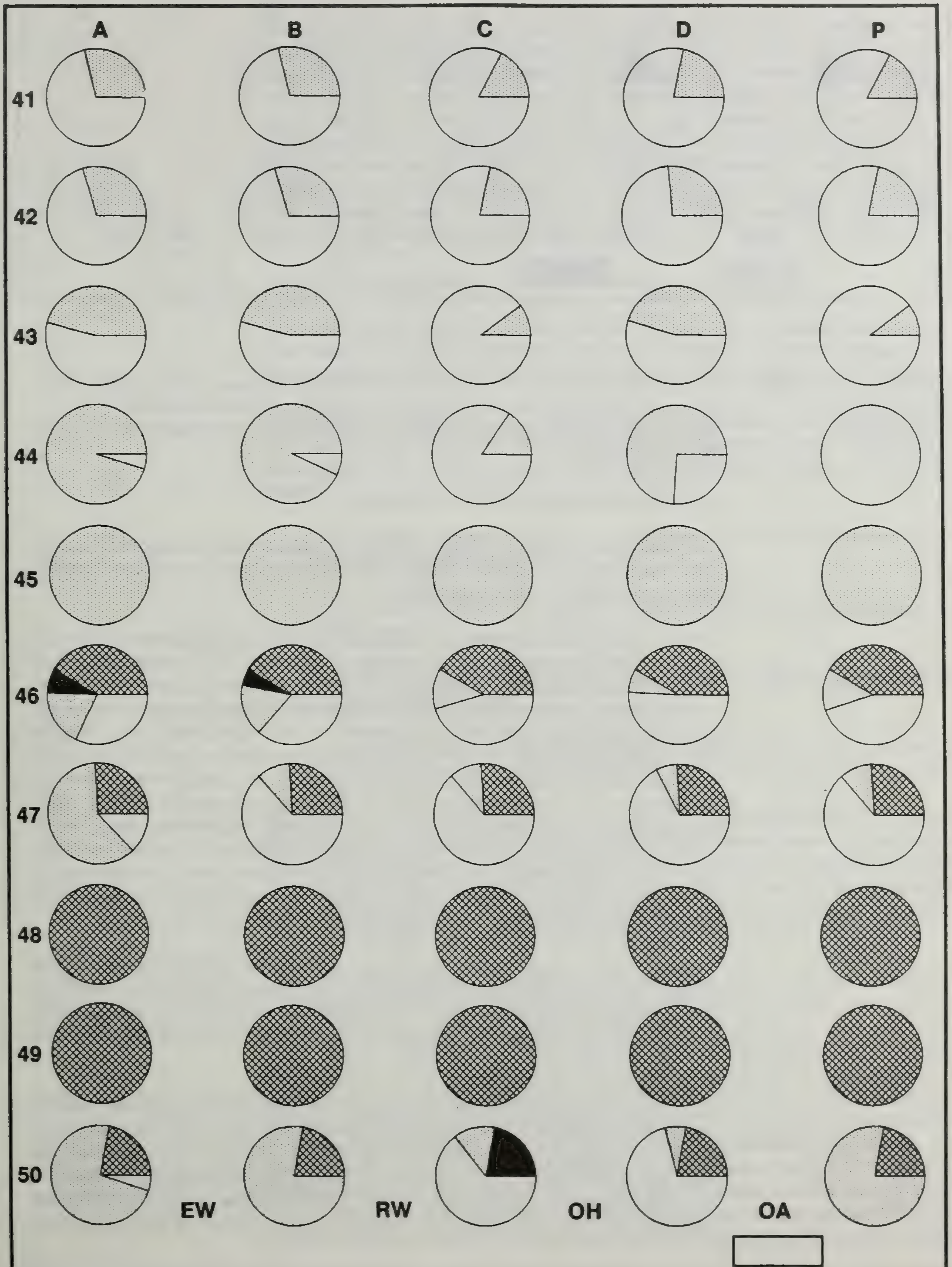
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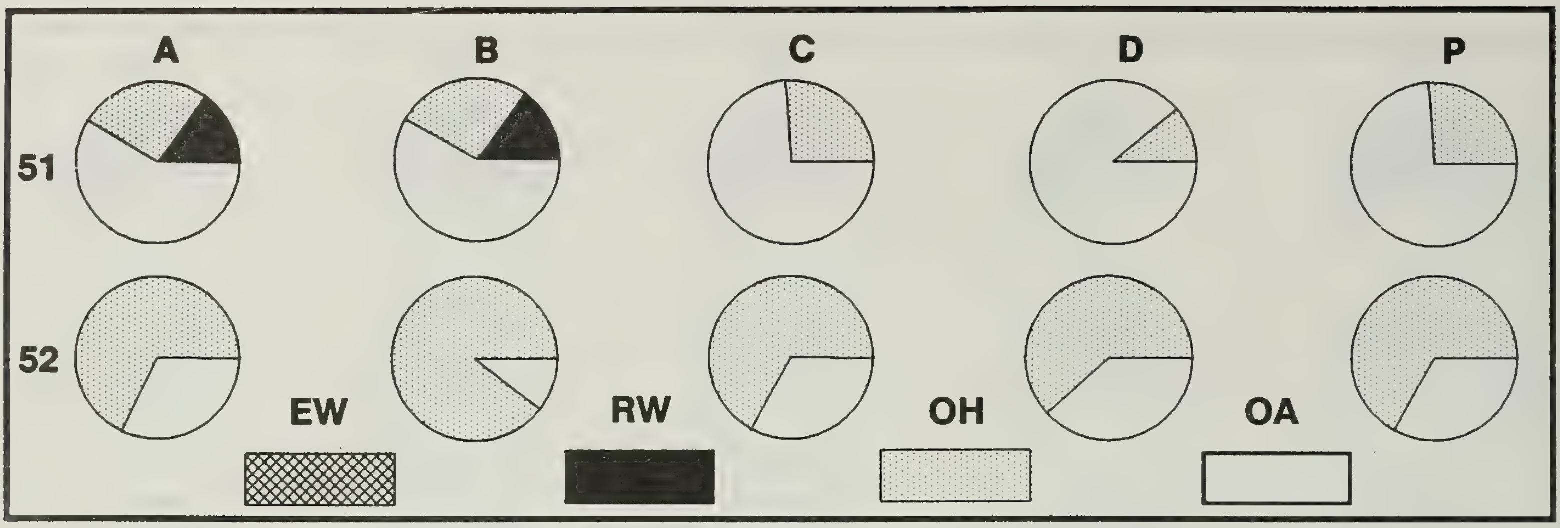

METHODOLOGY AND SCIENTIFIC ACCURACY

Seven methodologies are used for the Minerals analysis in the Supplement. Three are used for mineral resource inventories, and the other four involve the analysis of environmental consequences. These methodologies are described below.

Identified Locateable Mineral Resources

Methods used by the U. S. Bureau of Mines, Alaska Field Operations Center in their report, "An Economic Analysis, Tongass Land Management Plan, Mineral Resource Inventory" (Coldwell, 1990).

Initially, three USBM minerals professionals compiled a mineral resource inventory from all available sources. Their efforts identified 171 locateable mineral deposit areas (148 within Tongass N.F.). These 148 deposits were assigned to a mineral deposit model (Berg, 1984) and tonnage and grade were determined for each based on published information or were calculated using models developed by Cox and Singer (1986). The gross metal value (GMV) for each deposit area was calculated by combining the tonnage and grade figures with an average price from the period 1978-1987 for each commodity and then each deposit area was evaluated to determine their pretax net present value [NPV = GPV - (development + operating costs)] at zero percent discounted cash flow rate of return (DCFROR). Thirteen of the 148 deposit areas demonstrated a positive NPV @ 0% DCFROR. These 13 were then subjected to an evaluation using an after tax NPV @ 4% DCFROR and 7 exhibited positive cash flows.

The 148 deposit areas were grouped down to 52 identified mineral activity tracts (total acres = 604,989 on the Tongass N.F.) and further classified to Ranks 1,2 and 3, based upon attributes which would reflect their market demand and thus their likelyhood to attract exploration and development activity in the next 10 to 15 years.

Accuracy. While a rigorous statistical treatment was not inherent in the USBM's identified locateable mineral resource assessment, their ranking criteria employed to relegate deposit areas to priorities 1, 2 and 3, did include relative elements which essentially grouped the priorities by probability of development (1 = most likely, 3 = least likely). Priority 1 Areas contain at least one deposit with a positive after-tax NPV @ 4% DCFROR and/or contain at least one active

gold deposit (site of current industry activity). Priority 2 Areas contain at least one deposit with a positive pre-tax NPV @ 0% DCFROR and/or contain at least one critical and strategic mineral deposit with a vulnerable supply source. Priority 3 Areas do not contain any deposits with a positive NPV or vulnerable supply source critical and strategic minerals present. Improvements in beneficiation/metallurgical recovery techniques, increased mining efficiency, expanded reserves (grade/tonnage), or market improvements such as higher demand or price increases would be necessary to enhance the economics of these deposits. Lower ranking reflects a lack of available information, not necessarily a lesser likelihood of mineral occurence.

Undiscovered Locateable Mineral Resources

Methods used by the U.S. Geological Survey, Branch of Alaskan Geology in their report, "Undiscovered Locateable Mineral Resources of the Tongass National Forest and Adjacent Lands, Southeastern Alaska" (Brew et al, 1990).

Probabilistic assessment of undiscovered mineral resources involves a sequence of steps, starting with the acquisition of several types of data and ending with the numerical assessment and reporting of the procedures followed.

(1) Definition of the tracts that are permissive for the occurrence of one or more deposit types.

(2) Estimation of the numbers of undiscovered deposits of each type in each tract.

(3) Estimation of the expected tonnage and grade of undiscovered deposits of each type.

(4) Combination by computer simulation of steps (2) & (3) to produce a probability distribution of the quanities of contained metal in the tract.

Steps (1) & (2) are accomplished by a team of professionals who represent different geoscience subdisciplines and who have been actively engaged in the research required to acquire and interpret the data for this specific project; step (3) is obtained from the tonnage and grade models in Cox and Singer (1986) and other sources; and step (4) is done by a simulator, which in this case was the U.S. Geological Survey MARK3 mineral resource endowment simulator.

The basic information required for the interpretation and synthesis in an undiscovered mineral resource assessment includes regional bedrock geology, economic geology, bedrock geochemistry, stream-sediment and panned-concentrate geochemistry, aeromagnetic survey, aeroradioactivity survey, gravity survey, and telegeology. One or more basic and interpretive maps and reports are commonly prepared for each of these components, with two of the most used being (1) descriptions and locations of known mineral deposits and occurrences in the study area, and (2) a map showing which geologic units are permissive for the occurrence of different types of mineral deposits. This study draws heavily on pre-existing local 1 to 250,000-scale studies that already involved the use of such maps and other intermediate or interpretive material, therefore the only maps prepared specifically for this study are those showing

the locations of known mineral deposits and occurrences. These maps and the accompanying descriptions of 930 metal-bearing localities are a concise statement of the results of a century of mineral exploration and development in southeastern Alaska.

Accuracy. Column 10 of Tables 3 & 4, Undiscovered Locatable Mineral Resources of the Tongass National Forest and Adjacent Lands, Southeastern Alaska, estimates the number of as-yet-undiscovered deposits of each type discoverable by conventional mineral exploration methods in each mineral resource tract at the 0.95, 0.90, 0.50, 0.10, and 0.05 probability levels. Each tract is considered likely to contain one or more different types of mineral deposits.

The estimation of the number of deposits of a given type in a tract is the single most-critical step in probabalistic mineral-resource assessment. It requires reevaluating all of the factors used in initially defining the tract, together with three additional factors. (1) throroughness of exploration -- tracts that are already relatively throroughly explored are less likely to contain undiscovered deposits; (2) size of tracts -- small tracts are likely to contain fewer undiscovered deposits than are large ones; and (3) physical dimensions of deposit types -- different types of deposits occupy different volumes of rocks; for example, a porphyry copper deposit is physically a much larger system than is a polymetallic vein.

The estimates applied to the above five probability levels were made by discussions among a team of geoscience professionals. The process generally focusses first on a single undiscovered deposit and concensus is reached for that probability level. Then the higher and lower probability levels are estimated; this is sometimes done with "rules of thumb" for given deposit types. For example, minor podiform chromite deposits occur in clusters; thus one deposit at the 0.50 level might imply 10 deposits at the 0.95 level. In other cases, the maximum number of deposits inferred to be discoverable in a tract is assigned to other probability levels.

Some tracts have either minimum estimates or no estimates. For many tracts the estimate is the minimum possible; that is, one deposit at the 0.05 level. This estimate indicates a non-trivial probability of the occurrence of the deposit type in the tract. In some cases, this "default" estimate may result in the overestimation of the resource endowment, but it is not considered to be a factor that significantly biases the overall results of the assessment. Many of the tracts defined in the USGS's Tongass N.F. study on the basis of permissive geology, known occurrences, or other factors were judged either too small or too well explored to justify any probabalistic estimate. They are, nevertheless, mineral-resource assessment tracts as defined in the USGS report.

Saleable Mineral Resources

Methods used by the U.S. Forest Service, Alaska Region to establish a baseline inventory of saleable mineral use on the Tongass National Forest.

Due to a paucity of mineral material sales on the Tongass National Forest, and the substanitive quantities of mineral material (shot rock) used in the Forest Service transportation program, this in-service use of shot rock was selected to represent a baseline inventory of demand for mineral material on the forest. This

inventory was developed from Forest Service records of the miles of road types constructed between fiscal years 1977 and 1988, and assumes a shot rock utilization rate averaging 15,000 cubic yards per mile (cypm) for arterial roads, 13,500 cypm for collector roads, and 12,500 cypm for local roads. Shot rock volumes for utilization in reconstruction, temporary roads, log transfer facilities, and log sort yards could not be reliably estimated and thus were not included

All Mineral Resources

Methods used by the U.S. Forest Service, Alaska Region to utilize land use designation groupings in the analysis of environmental consequences and the effects of alternative implementation on the availability of all mineral resources.

To assess the relative effects of the allocation of land use designations in the various alternatives arrayed in the Supplement on the access to and the economic availability of all mineral resources, the land use designations were grouped into four catagories according to their inherent restrictiveness to mineral development activities. 1) Existing Lands Withdrawn, 2) Lands Recommended for Withdrawal, 3) Lands Open with High Operating Costs, and 4) Lands Open with Average Operating Costs. The relative acreage percentages of each of the four catagories (LUD groupings) are displayed graphically to depict the effects on all mineral development activities over the entire Tongass N.F. for each alternative.

Identified Locateable Mineral Resources

Methods used by the U.S. Forest Service, Alaska Region to utilize the USBM inventory in the analysis of environmental consequences and the effects of alternative implementation on the availability of identified mineral resources.

The 52 identified mineral activity tracts, together with the 3 ranking classifications and economic analyses of NPV @ 0% & 4% DCFROR were utilized to allocate the Minerals Land Use Designation for appropriate alternatives.

To assess the relative effects of the allocation of land use designations in the various alternatives arrayed in the Supplement on the access to and the economic availability of identified locateable mineral resources, the same four land use designation groupings detailed in 4) (above), were utilized. The relative acreage percentages of each of the four catagories (LUD groupings) are displayed graphically to depict the effects on the Minerals Land Use Designation allocation for each alternative. Additionally, these same 4 catagories (LUD groupings) are displayed graphically to depict the effects of allocated land use designations for each alternative on the USBM's 52 individual identified mineral activity tracts.

Undiscovered Locateable Mineral Resources

Methods used by the U.S. Forest Service, Alaska Region to utilize the USGS inventory in the analysis of environmental consequences and the effects of alternative implementation on the availability of undiscovered mineral resources.

To assess the relative effects of the allocation of land use designations in the various alternatives arrayed in the Supplement on the access to and the economic availability of undiscovered locateable mineral resources, the same four land use designations groupings detailed in 4) (above), were utilized. The relative acreage percentages of each of the four catagories (LUD groupings) are displayed graphically to depict the effects on the total undiscovered locateable mineral resource inventory for each alternative. After ascertaining the acreage percentages of the 4 catagories (LUD groupings) for an alternative, each catagory is then depicted graphically to display the percentages of each class (1-4) of undiscovered locateable mineral resource which they embrace. This is then repeated for each alternative.

Saleable Mineral Resources

Methods used by the U.S. Forest Service, Alaska Region to utilize the baseline inventory in the analysis of environmental consequences and the effects of alternative implementation on the availability of saleable mineral resources.

Demand for mineral material on the Tongass N.F. will continue to come primarily from inservice use of shot rock for forest transportation system components. Transportation projections for the Supplement are converted to rock volumes to estimate the future demand for mineral material on the forest. Temporal and areal distribution of the expected volumes is assessed for each alternative.

Appendix K

Subsistence Data

Appendix K

Subsistence

Introduction

This appendix presents four different types of information about subsistence use areas of Southeast Alaska rural residents. The four sets of tabular information are displayed alphabetically by each of 33 Southeast Alaska communities. Thirty-one of the communities are classified as rural, subsistence communities and two (Ketchikan and Juneau) are classified as non-rural, non-subsistence communities.

The first set of tables displays deer habitat capability and use by the Wildlife Analysis Areas (WAA's) ever hunted by household for each community. To determine the intensity of use of an area, presented is information about the number of households that have ever hunted in each WAA and how much of the WAA was actually used. This information is also displayed on the Subsistence Map in the Map Packet. In addition, the percent of each WAA that is in a recreation place is identified. To provide information about access, the percent of each WAA that is roaded is also presented.

The second set of tables presents information about those WAA's where community residents actually harvested deer according to Alaska Department of Fish and Game's (ADF&G) 1989 Hunter Harvest Survey. Analysis does not include those WAA's ever hunted by community households but only the WAA's where deer were harvested. To provide information about competition, the number of deer harvested by the community, by other subsistence hunters and by subsistence and non-subsistence hunters combined, is displayed by WAA. Deer habitat capability is presented by the first, second and fifth decades for each alternative to provide information about deer abundance and distribution. Both total habitat capability and 10 percent of total habitat capability is displayed. This analysis reflects the recommendation by ADF&G that no more than 10 percent of the estimated habitat capability be harvested. See the Wildlife section of the Supplement for a detailed explanation of this recommendation. For those communities where expected use exceeds available deer at 10 percent of habitat capability, analysis at 20 percent is also provided.

The third set of tables is identical to the second set in that information about competition and abundance and distribution of deer is presented by WAA. The difference is that this information is presented for every WAA ever hunted by community households rather than just those WAA's where hunting efforts were successful.

The fourth set of tables shows the cumulative percent of existing old-growth that is scheduled to be harvested in each alternative for the WAA's ever hunted by community households. The percent shown for the second decade is the total combined harvest of the first plus the second decade. The percent shown for the fifth decade is the total combined harvest of the first, second, third, forth and fifth decades. That is, the percent shown for the fifth decade is the total amount of existing old-growth scheduled for harvest for the next 50 years.

Intensity of Use of Wildlife Analysis Areas Ever Used for Deer Hunting by Subsistence Community Households and Access, Competition, Abundance and Distribution of Deer

Angoon

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
3001	99.54	0.46	0.00	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3104	100.00	0.00	0.00	0.00	0.00	133	0.00	96.24	3.76	3,070	4.33	86	31
3308	65.78	26.83	7.39	0.00	0.00	187	24.60	37.97	37.43	3,160	5.92	26	36
3311	98.59	1.41	0.00	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	86.35	13.65	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	86.22	6.62	7.16	0.00	0.00	187	5.35	65.24	29.41	1,614	11.59	26	21
3314	98.25	1.75	0.00	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	59.74	27.90	12.36	0.00	0.00	216	22.69	75.00	2.31	1,328	16.27	33	11
3416	99.20	0.80	0.00	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3525	93.51	6.49	0.00	0.00	0.00	289	0.00	44.64	55.36	2,149	13.45	43	35
3526	95.93	4.07	0.00	0.00	0.00	286	0.00	31.47	68.53	1,213	23.58	77	35
3551	89.87	10.13	0.00	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3627	82.41	15.15	2.44	0.00	0.00	95	10.53	21.05	68.42	899	10.57	33	22
3628	97.83	2.17	0.00	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	99.89	0.11	0.00	0.00	0.00	174	0.00	31.03	68.97	1,798	9.68	24	7
3731	91.64	3.41	4.94	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
3835	0.67	99.33	0.00	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	0.82	99.18	0.00	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3837	0.29	99.23	0.48	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
3938	1.10	98.90	0.00	0.00	0.00	238	0.00	53.78	46.22	3,159	7.53	33	0
3939	5.71	94.29	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	0.93	98.85	0.22	0.00	0.00	157	4.46	89.17	6.37	2,580	6.09	29	5
4041	0.57	90.95	8.48	0.00	0.00	43	53.49	11.63	34.88	2,165	1.99	20	6
4042	1.38	52.62	33.78	12.21	0.00	79	87.34	0.00	12.66	2,626	3.01	25	0
4043	7.20	87.45	4.87	0.47	0.00	42	16.67	0.00	83.33	1,755	2.39	58	0
4044	2.31	94.44	3.25	0.00	0.00	199	5.03	39.70	55.28	1,315	15.13	4	0
4054	1.57	84.68	10.04	3.71	0.00	12	58.33	0.00	41.67	2,266	0.53	4	0
4145	6.71	93.29	0.00	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4146	6.56	93.44	0.00	0.00	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4147	0.35	99.65	0.00	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4148	6.75	93.25	0.00	0.00	0.00	264	0.00	8.71	91.29	1,678	15.73	31	7
4150	3.46	96.54	0.00	0.00	0.00	291	0.00	1.72	98.28	891	32.66	53	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Coffman Cove

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1-10% H.holds	11-50% H.holds	51-100% H.holds	>100% H.holds	Total Deer Harvested	% Total Deer Harvested by: City Harvest	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
408	N/U	N/U	N/U	N/U	N/U	58	12.07	0.00	87.93	687	8.44	66.00	6.00
901	N/U	N/U	N/U	N/U	N/U	18	38.89	33.33	27.78	2,215	0.81	19.00	7.00
902	N/U	N/U	N/U	N/U	N/U	20	65.00	35.00	0.00	6,568	0.30	31.00	1.00
1003	81.48	18.52	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20.00	83.00
1108	N/U	N/U	N/U	N/U	N/U	6	100.00	0.00	0.00	4,234	0.14	44.00	1.00
1214	89.38	10.62	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42.00	17.00
1315	81.97	18.03	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20.00	58.00
1316	100.00	0.00	0.00	0.00	0.00	65	0.00	53.85	46.15	827	7.86	30.00	1.00
1317	100.00	0.00	0.00	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44.00	33.00
1318	94.29	5.71	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20.00	15.00
1319	92.06	7.94	0.00	0.00	0.00	195	0.00	82.05	17.95	2,857	6.83	26.00	30.00
1323	98.15	1.85	0.00	0.00	0.00	93	0.00	73.12	26.88	1,981	4.69	18.00	2.00
1332	99.17	0.83	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38.00	16.00
1420	2.25	59.53	38.22	0.00	0.00	115	23.48	10.43	66.09	1,035	11.11	23.00	53.00
1421	24.22	54.37	21.41	0.00	0.00	224	21.43	33.48	45.09	3,073	7.29	26.00	44.00
1422	71.87	27.21	0.92	0.00	0.00	375	1.60	66.13	32.27	4,412	8.50	23.00	58.00
1527	87.36	12.64	0.00	0.00	0.00	12	50.00	50.00	0.00	1,730	0.69	37.00	45.00
1528	98.74	1.26	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51.00	15.00
1529	80.35	19.65	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23.00	58.00
1530	22.50	77.50	0.00	0.00	0.00	196	16.84	54.59	28.57	1,861	10.53	20.00	55.00
1531	98.21	1.79	0.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22.00	90.00
1708	97.77	2.23	0.00	0.00	0.00	0	0.00	0.00	0.00	969	0.00	55.00	0.00
1812	100.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	812	0.00	0.00	0.00
1815	100.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	333	0.00	0.00	0.00
1901	100.00	0.00	0.00	0.00	0.00	15	0.00	0.00	100.00	3,544	0.42	34.00	14.00
1903	100.00	0.00	0.00	0.00	0.00	15	0.00	100.00	0.00	2,675	0.56	41.00	32.00
1904	100.00	0.00	0.00	0.00	0.00	122	0.00	100.00	0.00	627	19.46	93.00	47.00
1905	100.00	0.00	0.00	0.00	0.00	26	0.00	100.00	0.00	2,974	0.87	26.00	59.00
1906	6.18	93.82	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97.00	48.00
1910	100.00	0.00	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26.00	3.00
2007	100.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	2,811	0.00	32.00	58.00
5134	100.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	3,617	0.00	12.00	9.00
5138	100.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	1,550	0.00	0.00	0.00

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS.

Craig

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1-10% H.holds	11-50% H.holds	51-100% H.holds	>100% H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	4.41	0.00	94.53	1.05	0.00	128	46.88	25.78	27.34	2,919	4.39	20	83
1105	77.98	21.72	0.30	0.00	0.00	5	0.00	0.00	100.00	6,033	0.08	40	3
1107	82.27	15.09	2.63	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1210	99.40	0.60	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1213	92.85	7.15	0.00	0.00	0.00	10	0.00	0.00	100.00	1,197	0.84	50	1
1214	65.76	25.15	9.08	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	93.58	3.90	2.52	0.00	0.00	92	7.61	65.22	27.17	2,838	3.24	20	58
1316	64.31	17.55	18.15	0.00	0.00	65	30.77	23.08	46.15	827	7.86	30	1
1317	18.56	26.32	55.12	0.00	0.00	74	81.08	5.41	13.51	1,093	6.77	44	33
1318	5.08	36.13	55.16	3.63	0.00	399	42.11	43.86	14.04	1,796	22.22	20	15
1319	59.88	25.95	13.81	0.35	0.00	195	3.59	78.46	17.95	2,857	6.83	26	30
1323	2.98	78.85	18.18	0.00	0.00	93	29.03	44.09	26.88	1,981	4.69	18	2
1332	22.28	24.21	53.51	0.00	0.00	23	30.43	47.83	21.74	2,805	0.82	38	16
1420	13.91	31.65	48.45	5.85	0.14	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	30.73	39.02	23.01	6.06	1.18	224	8.93	45.98	45.09	3,073	7.29	26	44
1422	27.28	20.38	34.58	15.64	2.11	375	35.73	32.00	32.27	4,412	8.50	23	58
1525	99.43	0.57	0.00	0.00	0.00	24	0.00	79.17	20.83	2,397	1.00	9	86
1526	60.68	39.32	0.00	0.00	0.00	110	11.82	60.91	27.27	2,772	3.97	50	9
1527	67.27	14.05	15.69	2.99	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	80.50	15.70	3.80	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	73.41	9.28	17.31	0.00	0.00	157	8.28	78.98	12.74	2,501	6.28	23	58
1530	65.27	13.89	18.79	2.05	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	16.77	63.54	19.69	0.00	0.00	45	15.56	84.44	0.00	2,623	1.72	22	90
1812	99.87	0.13	0.00	0.00	0.00	0	0	0	0	812	0.00	0	0
1815	98.90	1.10	0.00	0.00	0.00	0	0	0	0	333	0.00	0	0
1905	99.79	0.21	0.00	0.00	0.00	26	0.00	100.00	0.00	2,974	0.87	26	59
5018	94.27	5.73	0.00	0.00	0.00	0	0	0	0	1,558	0.00	0	0
5130	96.68	3.32	0.00	0.00	0.00	0	0	0	0	2,898	0.00	0	0
5131	97.44	2.56	0.00	0.00	0.00	1	0.00	100.00	0.00	1,392	0.07	21	32

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Edna Bay

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	3.30	96.70	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1105	100.00	0.00	0.00	0.00	0.00	5	0.00	0.00	100.00	6,033	0.08	40	3
1107	97.61	2.39	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1108	97.30	2.70	0.00	0.00	0.00	6	0.00	100.00	0.00	3,866	0.16	44	1
1318	64.07	35.93	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20	15
1323	37.86	62.14	0.00	0.00	0.00	93	0.00	73.12	26.88	1,981	4.69	18	2
1332	53.05	46.95	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1422	71.42	28.58	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1524	1.00	99.00	0.00	0.00	0.00	0	0	0	0	726	0.00	100	1
1525	1.00	90.49	8.51	0.00	0.00	24	45.83	33.33	20.83	2,397	1.00	9	86
1526	2.01	97.89	0.10	0.00	0.00	110	4.55	68.18	27.27	2,772	3.97	50	9
1527	60.19	39.81	0.00	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	96.55	3.45	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	77.91	22.09	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	97.57	2.43	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	7.22	88.51	4.27	0.00	0.00	45	31.11	68.89	0.00	2,623	1.72	22	90
1603	99.92	0.08	0.00	0.00	0.00	5	0.00	100.00	0.00	624	0.80	54	2
1605	93.21	6.79	0.00	0.00	0.00	37	0.00	100.00	0.00	840	4.40	21	10
1901	96.99	3.01	0.00	0.00	0.00	15	0.00	0.00	100.00	3,544	0.42	34	14
1903	95.50	4.50	0.00	0.00	0.00	15	0.00	100.00	0.00	2,675	0.56	41	32
1904	100.00	0.00	0.00	0.00	0.00	122	0.00	100.00	0.00	627	19.46	93	47
1905	90.87	9.13	0.00	0.00	0.00	26	0.00	100.00	0.00	2,974	0.87	26	59
1906	40.91	59.09	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48
2007	97.26	2.74	0.00	0.00	0.00	0	0	0	0	2,811	0.00	32	58
2008	88.48	11.53	0.00	0.00	0.00	0	0	0	0	366	0.00	0	0
3207	97.63	2.37	0.00	0.00	0.00	128	0.00	100.00	0.00	812	15.76	4	0
3308	93.79	6.21	0.00	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3311	97.94	2.06	0.00	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3525	99.96	0.04	0.00	0.00	0.00	289	0.00	44.64	55.36	2,149	13.45	43	35
3526	93.60	6.40	0.00	0.00	0.00	286	0.00	31.47	68.53	1,213	23.58	77	35
3733	94.56	5.44	0.00	0.00	0.00	122	0.00	100.00	0.00	1,798	6.79	6	0
3734	87.38	12.62	0.00	0.00	0.00	152	5.26	65.79	28.95	2,026	7.50	13	0
3939	99.85	0.15	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	90.06	9.94	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
5015	3.27	96.73	0.00	0.00	0.00	0	0	0	0	1,313	0.00	0	0

Edna Bay (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
5017	90.25	9.75	0.00	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5130	100.00	0.00	0.00	0.00	0.00	0	0	0	0	2,898	0.00	0	0
5134	99.05	0.95	0.00	0.00	0.00	0	0	0	0	3,617	0.00	12	9
5138	90.54	9.46	0.00	0.00	0.00	0	0	0	0	1,550	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Elfin Cove

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
3416	98.40	1.60	0.00	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	87.49	12.51	0.00	0.00	0.00	248	0.00	77.82	22.18	3,028	8.19	29	0
3418	84.00	16.00	0.00	0.00	0.00	91	4.40	51.65	43.96	1,817	5.01	95	1
3419	97.77	2.23	0.00	0.00	0.00	102	0.00	95.10	4.90	760	13.42	61	1
3420	54.00	45.91	0.09	0.00	0.00	99	8.08	26.26	65.66	510	19.41	45	0
3421	39.06	44.13	16.80	0.00	0.00	109	36.70	44.95	18.35	835	13.05	45	0
3836	N/U	N/U	N/U	N/U	N/U	334	2.40	0.00	97.60	1,812	18.43	99	3
4222	97.49	2.51	0.00	0.00	0.00	257	0.00	72.76	27.24	2,217	11.59	70	2
4256	64.04	35.96	0.00	0.00	0.00	105	1.90	74.29	23.81	804	13.06	100	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Gustavus

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
2305	97.72	2.28	0.00	0.00	0.00	5	0.00	0.00	100.00	285	1.75	12	2
2306	99.79	0.21	0.00	0.00	0.00	11	0.00	100.00	0.00	165	6.67	27	15
3417	97.57	2.43	0.00	0.00	0.00	248	0.00	77.82	22.18	3,028	8.19	29	0
3418	97.52	2.48	0.00	0.00	0.00	91	0.00	56.04	43.96	1,817	5.01	95	1
3420	68.96	31.04	0.00	0.00	0.00	99	0.00	34.34	65.66	510	19.41	45	0
3421	89.00	11.00	0.00	0.00	0.00	109	0.00	81.65	18.35	835	13.05	45	0
3523	82.67	17.33	0.00	0.00	0.00	156	5.13	88.46	6.41	1,342	11.62	96	22
3524	83.23	16.77	0.00	0.00	0.00	289	0.00	75.78	24.22	260	111.15	30	4
3525	96.73	3.27	0.00	0.00	0.00	289	0.00	44.64	55.36	2,149	13.45	43	35
3526	83.30	16.70	0.00	0.00	0.00	286	0.00	31.47	68.53	1,213	23.58	77	35
3551	98.02	1.98	0.00	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3629	97.77	2.23	0.00	0.00	0.00	174	0.00	31.03	68.97	1,798	9.68	24	7
3630	99.77	0.22	0.00	0.00	0.00	40	0.00	62.50	37.50	527	7.59	10	1
3837	99.64	0.36	0.00	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
4044	99.94	0.06	0.00	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4145	85.22	14.78	0.00	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4222	74.17	25.62	0.21	0.00	0.00	257	8.95	63.81	27.24	2,217	11.59	70	2
4252	73.87	25.94	0.19	0.00	0.00	373	4.56	79.36	16.09	454	82.16	91	1
4253	97.95	2.05	0.00	0.00	0.00	200	0.00	82.50	17.50	1,026	19.49	80	12
4256	-0.28	26.95	73.32	0.00	0.00	105	59.05	17.14	23.81	804	13.06	100	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Haines

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1319	N/U	N/U	N/U	N/U	N/U	195	2.05	80.00	17.95	2,857	6.83	26	30
1527	98.52	1.48	0.00	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1530	99.40	0.60	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
2202	98.68	1.32	0.00	0.00	0.00	4	100.00	0.00	0.00	136	2.94	40	0
2304	95.18	0.00	4.82	0.00	0.00	0	0	0	0	0	0	0	0
2305	98.83	0.00	1.17	0.00	0.00	5	0.00	0.00	100.00	285	1.75	12	2
2620	9.22	90.74	0.00	0.00	0.00	20	0.00	0.00	100.00	78	25.64	53	2
2621	81.03	18.97	0.00	0.00	0.00	104	0.00	3.85	96.15	166	62.65	44	0
2722	96.43	3.57	0.00	0.00	0.00	321	0.00	0.00	100.00	796	40.33	78	4
3001	86.28	9.99	3.73	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3002	94.80	1.32	3.88	0.00	0.00	638	0.00	92.32	7.68	861	74.10	33	12
3003	94.97	5.03	0.00	0.00	0.00	458	0.00	94.54	5.46	1,530	29.93	36	9
3308	86.40	0.00	13.60	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3309	98.83	0.00	1.17	0.00	0.00	195	0.00	97.44	2.56	960	20.31	1	1
3310	97.91	0.00	2.09	0.00	0.00	365	0.00	98.63	1.37	1,174	31.09	19	11
3311	91.88	0.00	8.12	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	93.24	0.00	6.75	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	97.44	0.00	2.56	0.00	0.00	187	0.00	70.59	29.41	1,614	11.59	26	21
3314	99.63	0.00	0.37	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	95.43	0.00	4.57	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3416	99.77	0.00	0.23	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	89.68	3.21	7.12	0.00	0.00	248	5.24	72.58	22.18	3,028	8.19	29	0
3418	97.68	2.32	0.00	0.00	0.00	91	4.40	51.65	43.96	1,817	5.01	95	1
3419	93.70	0.00	6.30	0.00	0.00	102	0.00	95.10	4.90	760	13.42	61	1
3420	69.53	20.16	10.31	0.00	0.00	99	26.26	8.08	65.66	510	19.41	45	0
3421	95.06	4.94	0.00	0.00	0.00	109	23.85	57.80	18.35	835	13.05	45	0
3523	63.06	26.89	10.05	0.00	0.00	156	2.56	91.03	6.41	1,342	11.62	96	22
3524	33.14	0.00	66.86	0.00	0.00	289	1.38	74.39	24.22	260	111.15	30	4
3525	57.09	39.64	3.27	0.00	0.00	289	4.50	40.14	55.36	2,149	13.45	43	35
3526	19.85	70.11	10.04	0.00	0.00	286	9.09	22.38	68.53	1,213	23.58	77	35
3551	68.50	11.15	20.34	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3627	42.79	38.98	18.24	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22
3628	85.39	9.81	4.79	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	48.23	42.78	8.98	0.00	0.00	174	9.77	21.26	68.97	1,798	9.68	24	7
3630	74.73	25.12	0.15	0.00	0.00	40	52.50	10.00	37.50	527	7.59	10	1
3835	68.76	5.74	25.50	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	73.72	22.30	3.98	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3837	96.65	2.67	0.68	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
3938	94.99	2.24	2.76	0.00	0.00	238	5.46	48.32	46.22	3,159	7.53	33	0
3939	99.54	0.46	0.00	0.00	0.00	346	1.16	85.84	13.01	2,854	12.12	31	0
3940	N/U	N/U	N/U	N/U	N/U	157	2.55	91.08	6.37	2,580	6.09	29	5

Haines (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
4041	100.00	0.00	0.00	0.00	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6
4042	85.08	14.92	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4043	97.06	1.66	1.28	0.00	0.00	42	0.00	16.67	83.33	1,755	2.39	58	0
4044	92.72	1.47	5.81	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4054	96.57	3.43	0.00	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	95.61	4.39	0.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
4145	99.35	0.00	0.65	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4147	97.70	2.30	0.00	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4149	88.05	11.95	0.00	0.00	0.00	206	6.31	13.59	80.10	1,256	16.40	31	0
4150	93.44	6.56	0.00	0.00	0.00	291	0.00	1.72	98.28	891	32.66	53	0
4222	75.80	18.35	5.85	0.00	0.00	257	38.13	34.63	27.24	2,217	11.59	70	2
4252	85.94	0.47	13.60	0.00	0.00	373	5.63	78.28	16.09	454	82.16	91	1
4253	75.47	1.13	23.40	0.00	0.00	200	19.00	63.50	17.50	1,026	19.49	80	12

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Hollis

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	4.41	95.59	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1107	97.80	0.71	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1214	86.88	9.20	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	100.00	0.00	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	73.81	23.91	0.00	0.00	0.00	65	4.62	49.23	46.15	827	7.86	30	1
1317	35.97	56.59	0.00	0.00	0.00	74	2.70	83.78	13.51	1,093	6.77	44	33
1318	84.16	15.82	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20	15
1323	100.00	0.00	0.00	0.00	0.00	93	0.00	73.12	26.88	1,981	4.69	18	2
1332	85.73	9.99	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1420	62.79	16.13	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	62.07	27.23	0.00	0.00	0.00	224	0.00	54.91	45.09	3,073	7.29	26	44
1422	71.16	6.79	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1527	90.73	2.40	0.00	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	98.34	0.44	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	77.82	11.80	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	80.54	7.12	0.00	0.00	0.00	196	0.51	70.92	28.57	1,861	10.53	20	55
1531	53.00	0.00	0.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Hoonah

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
2305	77.66	22.34	0.00	0.00	0.00	5	0.00	0.00	100.00	285	1.75	12	2
2306	85.90	14.10	0.00	0.00	0.00	11	0.00	100.00	0.00	165	6.67	27	15
3308	82.87	17.13	0.00	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3309	96.64	3.36	0.00	0.00	0.00	195	0.00	97.44	2.56	960	20.31	1	1
3311	99.11	0.89	0.00	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	96.09	3.91	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3315	94.49	5.51	0.00	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3416	89.17	10.83	0.00	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	78.62	21.38	0.00	0.00	0.00	248	0.00	77.82	22.18	3,028	8.19	29	0
3418	67.52	32.48	0.00	0.00	0.00	91	0.00	56.04	43.96	1,817	5.01	95	1
3419	93.69	6.31	0.00	0.00	0.00	102	0.00	95.10	4.90	760	13.42	61	1
3420	38.99	29.38	31.39	0.24	0.00	99	0.00	34.34	65.66	510	19.41	45	0
3421	14.55	63.92	21.52	0.00	0.00	109	0.00	81.65	18.35	835	13.05	45	0
3523	26.49	33.36	39.24	0.91	0.00	156	67.95	25.64	6.41	1,342	11.62	96	22
3524	12.01	17.53	59.40	11.06	0.00	289	32.18	43.60	24.22	260	111.15	30	4
3525	31.64	45.10	23.26	0.00	0.00	289	2.42	42.21	55.36	2,149	13.45	43	35
3526	69.74	24.04	6.23	0.00	0.00	286	0.00	31.47	68.53	1,213	23.58	77	35
3551	6.97	42.10	40.70	10.23	0.00	307	28.01	45.93	26.06	1,768	17.36	0	0
3628	73.61	26.39	0.00	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	74.34	25.66	0.00	0.00	0.00	174	0.00	31.03	68.97	1,798	9.68	24	7
3630	80.00	19.11	0.89	0.00	0.00	40	0.00	62.50	37.50	527	7.59	10	1
3835	95.32	4.68	0.00	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	74.30	21.96	3.74	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3837	79.02	19.15	1.84	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
4042	85.90	14.10	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4043	98.34	1.66	0.00	0.00	0.00	42	0.00	16.67	83.33	1,755	2.39	58	0
4044	93.29	5.09	1.61	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4054	96.08	3.92	0.00	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	92.03	7.97	0.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
4222	17.10	50.84	28.24	3.82	0.00	257	15.56	57.20	27.24	2,217	11.59	70	2
4253	5.82	45.97	41.06	7.15	0.00	200	36.50	46.00	17.50	1,026	19.49	80	12

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Hydaburg

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0.00 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 -100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA In Recreation Place	% WAA Roaded
901	N/U	N/U	N/U	N/U	N/U	18	22.22	50.00	27.78	2,237	0.80	19	7
1003	4.41	95.59	0.00	0	0	128	0.00	72.66	27.34	2,919	4.39	20	83
1105	1.53	79.76	18.71	0	0	5	0.00	0.00	100.00	6,033	0.08	40	3
1106	6.20	55.21	38.60	0	0	34	0.00	100.00	0.00	432	7.87	9	3
1107	2.43	58.02	39.56	0	0	49	8.16	40.82	51.02	6,915	0.71	27	15
1108	7.96	86.94	5.10	0	0	6	0.00	100.00	0.00	3,866	0.16	44	1
1209	1.10	98.90	0.00	0	0	0	0.00	0.00	0.00	4,010	0.00	23	1
1210	1.87	98.13	0.00	0	0	20	0.00	0.00	100.00	2,600	0.77	41	1
1211	2.63	97.37	0.00	0	0	132	0.00	12.12	87.88	2,187	6.04	9	21
1212	4.11	95.89	0.00	0	0	46	0.00	0.00	100.00	1,362	3.38	75	1
1214	2.76	97.24	0.00	0	0	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	3.66	96.34	0.00	0	0	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	0.48	99.52	0.00	0	0	65	0.00	53.85	46.15	827	7.86	30	1
1317	0.98	96.24	2.78	0	0	74	2.70	83.78	13.51	1,093	6.77	44	33
1318	3.24	95.45	1.31	0	0	399	1.00	84.96	14.04	1,796	22.22	20	15
1323	6.08	93.92	0.00	0	0	93	4.30	68.82	26.88	1,981	4.69	18	2
1332	3.18	70.39	26.43	0	0	23	17.39	60.87	21.74	2,805	0.82	38	16
1420	2.96	95.87	1.17	0	0	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	3.08	89.82	7.09	0	0	224	1.79	53.13	45.09	3,073	7.29	26	44
1422	0.82	95.55	3.63	0	0	375	1.07	66.67	32.27	4,412	8.50	23	58
1524	1.00	99.00	0.00	0	0	0	0.00	0.00	0.00	726	0.00	100	1
1525	1.99	98.01	0.00	0	0	24	0.00	79.17	20.83	2,397	1.00	9	86
1526	4.47	95.53	0.00	0	0	110	0.00	72.73	27.27	2,772	3.97	50	9
1527	2.05	97.95	0.00	0	0	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	7.93	92.07	0.00	0	0	51	0.00	100.00	0.00	378	13.49	51	15
1529	3.14	96.86	0.00	0	0	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	5.30	94.70	0.00	0	0	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	20.11	79.89	0.00	0	0	45	0.00	100.00	0.00	2,623	1.72	22	90
1816	49.66	50.34	0.00	0	0	0	0.00	0.00	0.00	716	0.00	0	0
1901	3.22	96.78	0.00	0	0	15	0.00	0.00	100.00	3,544	0.42	34	14
1902	32.71	67.29	0.00	0	0	5	0.00	100.00	0.00	261	1.92	55	93
1903	7.39	92.61	0.00	0	0	15	0.00	100.00	0.00	2,675	0.56	41	32

Hydaburg (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0.00 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 -100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1904	24.35	75.65	0.00	0	0	122	0.00	100.00	0.00	627	19.46	93	47
1905	0.18	99.82	0.00	0	0	26	0.00	100.00	0.00	2,974	0.87	26	59
1906	41.75	58.25	0.00	0	0	37	0.00	100.00	0.00	793	4.67	97	48
1910	9.57	90.43	0.00	0	0	15	0.00	100.00	0.00	3,588	0.42	26	3

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision database QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Hyder

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1107	99.20	0.80	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1108	99.91	0.09	0.00	0.00	0.00	6	0.00	100.00	0.00	3,866	0.16	44	1
1209	68.97	31.03	0.00	0.00	0.00	0	0	0	0	4,010	0.00	23	1
1210	38.27	61.73	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1211	47.55	52.45	0.00	0.00	0.00	132	0.00	12.12	87.88	2,187	6.04	9	21
1212	97.83	2.17	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1213	52.31	47.69	0.00	0.00	0.00	10	0.00	0.00	100.00	1,197	0.84	50	1
1318	95.32	4.68	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20	15
1319	99.22	0.78	0.00	0.00	0.00	195	0.00	82.05	17.95	2,857	6.83	26	30
1420	88.93	11.07	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	79.82	20.18	0.00	0.00	0.00	224	0.89	54.02	45.09	3,073	7.29	26	44
1422	85.89	14.11	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1530	98.32	1.68	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Juneau

Wildlife Analysis Area	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Non Subsist	Subsist Hunters	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1332	23	21.74	0.00	78.26	2,805	0	38	16
1420	115	4.35	61.74	33.91	1,035	0	23	53
1422	375	1.33	30.93	67.73	4,412	0	23	58
2305	5	100.00	0.00	0.00	285	0	12	2
2517	10	100.00	0.00	0.00	139	0	17	1
2620	20	100.00	0.00	0.00	78	0	53	2
2621	104	96.15	0.00	3.85	166	0	44	0
2722	321	92.21	7.79	0.00	796	0	78	4
2825	5	100.00	0.00	0.00	0	0	6	0
3002	638	2.35	5.33	92.32	861	0	33	12
3003	458	2.18	3.28	94.54	1,530	0	36	9
3105	78	32.05	0.00	67.95	2,429	0	8	2
3308	187	26.74	10.70	62.57	3,160	0	26	36
3309	195	2.56	0.00	97.44	960	0	1	1
3310	365	1.37	0.00	98.63	1,174	0	19	11
3311	306	1.63	1.63	96.73	1,443	0	27	2
3312	154	3.25	0.00	96.75	473	0	25	7
3313	187	13.37	16.04	70.59	1,614	0	26	21
3315	216	2.31	0.00	97.69	1,328	0	33	11
3417	248	22.18	0.00	77.82	3,028	0	29	0
3418	91	43.96	-1.10	57.14	1,817	0	95	1
3419	102	4.90	0.00	95.10	760	0	61	1
3420	99	60.61	5.05	34.34	510	0	45	0
3421	109	18.35	0.00	81.65	835	0	45	0
3523	156	6.41	0.00	93.59	1,342	0	96	22
3524	289	22.49	1.73	75.78	260	0	30	4
3525	289	55.36	0.00	44.64	2,149	0	43	35
3526	286	68.53	0.00	31.47	1,213	0	77	35
3551	307	24.43	1.63	73.94	1,768	0	0	0
3627	95	68.42	-5.26	36.84	899	0	33	22

Juneau (continued)

Wildlife Analysis Area	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Non Subsist	Subsist Hunters	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
3628	10	100.00	0.00	0.00	1,093	0	18	7
3629	174	63.22	5.75	31.03	1,798	0	24	7
3630	40	37.50	0.00	62.50	527	0	10	1
3731	107	4.67	14.02	81.31	1,149	0	21	3
3732	68	29.41	0.00	70.59	287	0	12	0
3734	152	23.03	5.92	71.05	2,026	0	13	0
3835	227	92.95	4.41	2.64	1,080	0	42	0
3836	334	85.63	11.98	2.40	1,812	0	99	3
3837	114	74.56	21.93	3.51	1,233	0	4	3
3938	238	46.22	0.00	53.78	3,159	0	33	0
3939	346	13.01	0.00	86.99	2,854	0	31	0
3940	157	6.37	0.00	93.63	2,580	0	29	5
4041	43	34.88	0.00	65.12	2,165	0	20	6
4042	79	12.66	0.00	87.34	2,626	0	25	0
4043	42	59.52	23.81	16.67	1,755	0	58	0
4044	199	55.28	0.00	44.72	1,315	0	4	0
4054	12	41.67	0.00	58.33	2,266	0	4	0
4055	75	20.00	0.00	80.00	2,616	0	28	2
4145	188	85.11	5.32	9.57	1,196	0	31	0
4146	75	100.00	0.00	0.00	824	0	32	0
4147	170	100.00	0.00	0.00	942	0	41	0
4148	264	91.29	0.00	8.71	1,678	0	31	7
4149	206	80.10	0.00	19.90	1,256	0	31	0
4150	291	96.56	1.72	1.72	891	0	53	0
4222	257	25.29	1.95	72.76	2,217	0	70	2

Juneau (continued)

Wildlife Analysis Area	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Non Subsist	Subsist Hunters	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
4252	373	16.09	0.00	83.91	454	0	91	1
4253	200	17.50	0.00	82.50	1,026	0	80	12
4256	105	23.81	0.00	76.19	804	0	100	0
4302	10	100.00	0.00	0.00	0	0	42	0

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision database QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those where deer were actually harvested (ADF&G) not all WAA's ever hunted.
Juneau is not a subsistence community, therefore, no information regarding WAA's ever hunted is available.

Kake

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1904	87.78	12.22	0.00	0.00	0.00	122	0.00	100.00	0.00	627	19.46	93	47
1906	N/U	N/U	N/U	N/U	N/U	37	16.22	83.78	0.00	793	4.67	97	48
2007	99.84	0.16	0.00	0.00	0.00	0	0	0	0	2,811	0.00	32	58
2927	98.38	1.50	0.12	0.00	0.00	0	0	0	0	538	0.00	56	1
3001	99.75	0.25	0.00	0.00	0.00	553	0.54	93.31	6.15	3,408	16.23	69	19
3003	98.00	2.00	0.00	0.00	0.00	458	0.00	94.54	5.46	1,530	29.93	36	9
3308	92.25	7.53	0.21	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3310	99.16	0.84	0.00	0.00	0.00	365	0.00	98.63	1.37	1,174	31.09	19	11
3311	N/U	N/U	N/U	N/U	N/U	306	3.59	93.14	3.27	1,443	21.21	27	2
3312	97.72	2.27	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	91.23	8.35	0.42	0.00	0.00	187	0.00	70.59	29.41	1,614	11.59	26	21
3314	N/U	N/U	N/U	N/U	N/U	135	2.22	90.37	7.41	926	14.58	46	13
3315	69.30	22.68	8.02	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3731	78.68	15.49	5.84	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
3732	96.19	3.81	0.00	0.00	0.00	68	0.00	70.59	29.41	287	23.69	12	0
3733	94.06	5.87	0.07	0.00	0.00	122	0.00	100.00	0.00	1,798	6.79	6	0
3734	94.74	5.26	0.00	0.00	0.00	152	0.00	71.05	28.95	2,026	7.50	13	0
3938	66.52	20.21	13.27	0.00	0.00	238	8.40	45.38	46.22	3,159	7.53	33	0
3939	19.58	45.92	31.60	2.90	0.00	346	20.81	66.18	13.01	2,854	12.12	31	0
3940	27.22	41.72	28.08	2.98	0.00	157	16.56	77.07	6.37	2,580	6.09	29	5
4041	66.73	22.58	10.68	0.01	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6
4042	97.81	2.19	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4054	89.43	9.84	0.72	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	79.02	17.68	3.30	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
4145	90.60	9.40	0.00	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4146	100.00	0.00	0.00	0.00	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4148	92.07	7.93	0.00	0.00	0.00	264	0.00	8.71	91.29	1,678	15.73	31	7
4252	N/U	N/U	N/U	N/U	N/U	373	0.80	83.11	16.09	454	82.16	91	1
4253	N/U	N/U	N/U	N/U	N/U	200	1.50	81.00	17.50	1,026	19.49	80	12
5012	74.59	24.30	1.11	0.00	0.00	0	0	0	0	5,071	0.00	0	0
5013	50.62	40.96	8.42	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5014	84.57	15.43	0.00	0.00	0.00	0	0	0	0	2,357	0.00	0	0
5016	52.98	34.83	12.19	0.00	0.00	0	0	0	0	3,162	0.00	0	0
5017	99.90	0.10	0.00	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5018	38.73	53.27	8.00	0.00	0.00	0	0	0	0	1,558	0.00	0	0
5130	77.87	14.43	7.70	0.00	0.00	0	0	0	0	2,898	0.00	0	0

Kake (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
5131	73.33	16.62	10.05	0.00	0.00	1	0.00	100.00	0.00	1,392	0.07	21	32
5132	40.47	47.01	12.52	0.00	0.00	0	0	0	0	982	0.00	0	0
5134	86.62	11.57	1.81	0.00	0.00	0	0	0	0	3,617	0.00	12	9
5135	88.35	11.65	0.00	0.00	0.00	0	0	0	0	963	0.00	5	1

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Kasaan

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds)					Total Deer Harvested	% Total Deer Harvested by:			Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
	0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds		This Community	Other Subsist	Non Subsist				
1107	99.47	0.53	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1210	99.89	0.11	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1211	94.63	5.37	0.00	0.00	0.00	132	0.00	12.12	87.88	2,187	6.04	9	21
1212	88.92	11.08	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1214	79.26	20.74	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	44.00	56.00	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	73.88	26.12	0.00	0.00	0.00	65	0.00	53.85	46.15	827	7.86	30	1
1317	77.62	22.38	0.00	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1319	98.28	1.72	0.00	0.00	0.00	195	0.00	82.05	17.95	2,857	6.83	26	30
1332	93.23	6.77	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1817	96.93	3.07	0.00	0.00	0.00	13	0.00	23.08	76.92	1,625	0.80	47	0
1910	93.16	6.84	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Ketchikan

Wildlife Analysis Area	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	Percent Hab Cap Harvested	% WAA in Recreation Place	% WAA Roaded
202	32	31.25	0.00	68.75	0	0.00	0	0
405	15	100.00	0.00	0.00	2,103	0.71	19	11
406	39	51.28	12.82	35.90	2,659	1.47	21	11
407	46	100.00	0.00	0.00	1,126	4.09	39	8
408	58	79.31	8.62	12.07	478	12.13	66	6
509	56	100.00	0.00	0.00	1,385	4.04	43	8
510	56	44.64	0.00	55.36	1,947	2.88	35	28
612	76	100.00	0.00	0.00	1,894	4.01	26	1
613	91	100.00	0.00	0.00	1,560	5.83	78	3
614	17	58.82	0.00	41.18	631	2.69	66	0
901	18	27.78	0.00	72.22	2,237	0.80	19	7
1003	128	27.34	0.00	72.66	2,919	4.39	20	83
1105	5	100.00	0.00	0.00	6,033	0.08	40	3
1107	49	51.02	0.00	48.98	6,915	0.71	27	15
1210	20	100.00	0.00	0.00	2,600	0.77	41	1
1211	132	87.88	0.00	12.12	2,187	6.04	9	21
1212	46	100.00	0.00	0.00	1,362	3.38	75	1
1213	10	100.00	0.00	0.00	1,197	0.84	50	1
1214	81	62.96	0.00	37.04	1,749	4.63	42	17
1315	92	27.17	0.00	72.83	2,838	3.24	20	58
1316	65	46.15	0.00	53.85	827	7.86	30	1
1317	74	13.51	0.00	86.49	1,093	6.77	44	33
1318	399	12.78	1.25	85.96	1,796	22.22	20	15
1319	195	17.95	0.00	82.05	2,857	6.83	26	30
1323	93	26.88	0.00	73.12	1,981	4.69	18	2
1420	115	61.74	4.35	33.91	1,035	11.11	23	53
1421	224	45.09	0.00	54.91	3,073	7.29	26	44
1422	375	30.93	1.33	67.73	4,412	8.50	23	58
1525	24	20.83	0.00	79.17	2,397	1.00	9	86
1526	110	22.73	4.55	72.73	2,772	3.97	50	9
1529	157	12.74	0.00	87.26	2,501	6.28	23	58
1530	196	26.02	2.55	71.43	1,861	10.53	20	55
1707	5	100.00	0.00	0.00	865	0.58	70	0
1817	13	76.92	0.00	23.08	1,625	0.80	47	0
1901	15	100.00	0.00	0.00	3,544	0.42	34	14
2722	321	6.23	93.77	0.00	796	40.33	78	4
3002	638	3.13	4.70	92.16	861	74.10	33	12
3308	187	10.70	26.74	62.57	3,160	5.92	26	36
3313	187	5.35	24.06	70.59	1,614	11.59	26	21
3314	135	7.41	0.00	92.59	926	14.58	46	13
3629	174	5.75	63.22	31.03	1,798	9.68	24	7

Ketchikan (continued)

Wildlife Analysis Area	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	Percent Hab Cap Harvested	% WAA in Recreation Place	% WAA Roaded
3731	107	14.02	4.67	81.31	1,149	9.31	21	3
3835	227	2.20	95.15	2.64	1,080	21.02	42	0
3836	334	1.50	93.11	5.39	1,812	18.43	99	3
4043	42	23.81	59.52	16.67	1,755	2.39	58	0
4145	188	5.32	85.11	9.57	1,196	15.72	31	0
4222	257	1.95	25.29	72.76	2,217	11.59	70	2

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision database QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those where deer were actually harvested (ADF&G) not all WAA's ever hunted.
Ketchikan is not a subsistence community, therefore, no information regarding WAA's ever hunted is available.

Klawock

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
902	N/U	N/U	N/U	N/U	N/U	20	35.00	65.00	0.00	6,296	0.32	31	1
1003	4.41	0.00	95.59	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1105	97.33	2.67	0.00	0.00	0.00	5	0.00	0.00	100.00	6,033	0.08	40	3
1107	84.56	14.41	1.03	0.00	0.00	49	14.29	34.69	51.02	6,915	0.71	27	15
1213	98.99	1.01	0.00	0.00	0.00	10	0.00	0.00	100.00	1,197	0.84	50	1
1214	93.54	4.78	1.68	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	65.57	31.60	2.83	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	92.01	7.99	0.00	0.00	0.00	65	0.00	53.85	46.15	827	7.86	30	1
1317	66.20	25.07	8.73	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1318	4.94	36.53	54.87	3.66	0.00	399	28.32	57.64	14.04	1,796	22.22	20	15
1319	36.71	53.83	8.70	0.76	0.00	195	3.59	78.46	17.95	2,857	6.83	26	30
1323	2.65	18.67	78.12	0.56	0.00	93	7.53	65.59	26.88	1,981	4.69	18	2
1332	11.51	79.51	8.98	0.00	0.00	23	30.43	47.83	21.74	2,805	0.82	38	16
1420	5.43	50.32	36.61	7.64	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	28.29	40.83	22.99	7.88	0.00	224	6.25	48.66	45.09	3,073	7.29	26	44
1422	17.24	27.79	38.31	16.63	0.03	375	7.47	60.27	32.27	4,412	8.50	23	58
1524	1.00	99.00	0.00	0.00	0.00	0	0	0	0	726	0.00	100	1
1525	1.43	98.57	0.00	0.00	0.00	24	0.00	79.17	20.83	2,397	1.00	9	86
1526	8.86	91.14	0.00	0.00	0.00	110	0.00	72.73	27.27	2,772	3.97	50	9
1527	42.25	36.58	20.12	1.05	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	68.41	23.73	7.87	0.00	0.00	51	41.18	58.82	0.00	378	13.49	51	15
1529	57.96	22.64	19.40	0.00	0.00	157	17.83	69.43	12.74	2,501	6.28	23	58
1530	34.16	35.73	28.21	1.91	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	8.84	44.16	47.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90
3938	93.75	6.25	0.00	0.00	0.00	238	0.00	53.78	46.22	3,159	7.53	33	0
3939	85.15	14.85	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	86.61	13.39	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
4041	99.47	0.53	0.00	0.00	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6
4055	96.81	3.19	0.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
5012	90.18	9.82	0.00	0.00	0.00	0	0	0	0	5,071	0.00	0	0
5013	96.64	3.36	0.00	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5015	3.27	96.73	0.00	0.00	0.00	0	0	0	0	1,313	0.00	0	0
5018	94.13	5.87	0.00	0.00	0.00	0	0	0	0	1,558	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Kluckwan

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1420	73.87	26.13	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	86.94	13.06	0.00	0.00	0.00	224	0.00	123.00	101.00	3,073	7.29	26	44
2514	99.25	0.75	0.00	0.00	0.00	0	0	0	0	289	0.00	48	2
2620	76.07	23.89	0.00	0.00	0.00	20	0.00	0.00	100.00	78	25.64	53	2
2621	70.46	29.54	0.00	0.00	0.00	104	0.00	3.85	96.15	166	62.65	44	0
3001	96.60	3.40	0.00	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3002	94.48	5.52	0.00	0.00	0.00	638	0.00	92.32	7.68	861	74.10	33	12
3308	97.17	2.83	0.00	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3312	68.22	31.77	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	85.64	14.36	0.00	0.00	0.00	187	0.00	70.59	29.41	1,614	11.59	26	21
3314	99.33	0.67	0.00	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	93.17	6.83	0.00	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3524	98.70	1.30	0.00	0.00	0.00	289	0.00	75.78	24.22	260	111.15	30	4
3627	97.61	2.39	0.00	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22
3731	93.06	6.94	0.00	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
4041	96.62	3.38	0.00	0.00	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6
4042	85.26	14.74	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4043	99.90	0.10	0.00	0.00	0.00	42	0.00	16.67	83.33	1,755	2.39	58	0
4054	99.21	0.79	0.00	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	88.67	11.33	0.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Metlakatla

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
202	N/U	N/U	N/U	N/U	N/U	32	68.75	0.00	31.25	0	0.00	0	0
1107	97.44	2.56	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1108	78.48	21.51	0.00	0.00	0.00	6	0.00	100.00	0.00	3,866	0.16	44	1
1209	85.56	14.00	0.44	0.00	0.00	0	0	0	0	4,010	0.00	23	1
1210	85.07	12.43	2.51	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1211	47.68	52.32	0.00	0.00	0.00	132	1.52	10.61	87.88	2,187	6.04	9	21
1212	78.17	21.83	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1213	87.43	12.57	0.00	0.00	0.00	10	0.00	0.00	100.00	1,197	0.84	50	1
1214	99.06	0.94	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	86.65	13.35	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	99.98	0.02	0.00	0.00	0.00	65	10.77	43.08	46.15	827	7.86	30	1
1317	95.10	4.90	0.00	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1318	92.13	7.87	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20	15
1319	95.91	4.09	0.00	0.00	0.00	195	1.03	81.03	17.95	2,857	6.83	26	30
1332	97.25	2.75	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1420	99.08	0.92	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	93.03	6.97	0.00	0.00	0.00	224	0.00	54.91	45.09	3,073	7.29	26	44
1422	94.20	5.80	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1527	N/U	N/U	N/U	N/U	N/U	12	41.67	58.33	0.00	1,730	0.69	37	45
1528	97.50	2.50	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1530	87.12	12.88	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1814	99.18	0.82	0.00	0.00	0.00	0	0	0	0	365	0.00	0	0
1815	97.42	2.58	0.00	0.00	0.00	0	0	0	0	333	0.00	0	0
1906	30.58	69.42	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48
1910	96.58	3.42	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Meyers Chuck

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
614	N/U	N/U	N/U	N/U	N/U	17	41.18	0.00	58.82	631	2.69	66	0
821	N/U	N/U	N/U	N/U	N/U	1	100.00	0.00	0.00	1,209	0.08	11	1
1003	4.41	95.59	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1209	84.11	15.89	0.00	0.00	0.00	0	0	0	0	4,010	0.00	23	1
1210	94.12	5.88	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1212	91.12	8.88	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1214	85.06	14.94	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	55.03	44.97	0.00	0.00	0.00	92	1.09	71.74	27.17	2,838	3.24	20	58
1318	95.45	4.55	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20	15
1319	85.27	14.73	0.00	0.00	0.00	195	0.00	82.05	17.95	2,857	6.83	26	30
1420	70.54	29.46	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	80.09	19.91	0.00	0.00	0.00	224	0.45	54.46	45.09	3,073	7.29	26	44
1422	65.32	34.68	0.00	0.00	0.00	375	0.27	67.47	32.27	4,412	8.50	23	58
1526	89.52	10.48	0.00	0.00	0.00	110	0.00	72.73	27.27	2,772	3.97	50	9
1528	99.50	0.50	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	91.02	8.98	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1531	N/U	N/U	N/U	N/U	N/U	45	6.67	93.33	0.00	2,623	1.72	22	90
1812	98.99	1.01	0.00	0.00	0.00	0	0	0	0	812	0.00	0	0
1813	99.43	0.57	0.00	0.00	0.00	0	0	0	0	250	0.00	0	0
1814	97.65	2.35	0.00	0.00	0.00	0	0	0	0	365	0.00	0	0
1816	96.25	3.75	0.00	0.00	0.00	0	0	0	0	716	0.00	0	0
1817	57.80	42.20	0.00	0.00	0.00	13	23.08	0.00	76.92	1,625	0.80	47	0
1901	97.77	2.23	0.00	0.00	0.00	15	0.00	0.00	100.00	3,544	0.42	34	14
1902	69.28	30.72	0.00	0.00	0.00	5	0.00	100.00	0.00	261	1.92	55	93
1903	95.86	4.14	0.00	0.00	0.00	15	0.00	100.00	0.00	2,675	0.56	41	32
1906	66.93	33.08	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48
1910	69.19	30.81	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3
3315	90.49	9.51	0.00	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3627	85.72	14.28	0.00	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

North Whale Pass

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds)					Total Deer Harvested	% Total Deer Harvested by:			Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
	0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds		This Community	Other Subsist	Non Subsist				
1003	95.00	5.00	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1318	95.36	4.64	0.00	0.00	0.00	399	2.51	83.46	14.04	1,796	22.22	20	15
1319	99.46	0.54	0.00	0.00	0.00	195	2.56	79.49	17.95	2,857	6.83	26	30
1323	97.90	2.10	0.00	0.00	0.00	93	0.00	73.12	26.88	1,981	4.69	18	2
1420	97.89	2.11	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	93.78	6.22	0.00	0.00	0.00	224	2.23	52.68	45.09	3,073	7.29	26	44
1422	75.93	24.07	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1527	11.34	86.79	1.87	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	4.10	94.89	1.01	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	2.57	97.43	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	16.45	73.14	10.42	0.00	0.00	196	15.82	55.61	28.57	1,861	10.53	20	55
1906	100.00	0.00	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Pelican

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
2306	100.00	0.00	0.00	0.00	0.00	11	0.00	100.00	0.00	165	6.67	27	15
3001	94.16	0.00	0.00	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3002	99.67	0.00	0.00	0.00	0.00	638	0.47	91.85	7.68	861	74.10	33	12
3104	99.06	0.00	0.00	0.00	0.00	133	0.00	96.24	3.76	3,070	4.33	86	31
3311	N/U	N/U	N/U	N/U	N/U	306	2.61	94.12	3.27	1,443	21.21	27	2
3315	98.76	0.30	0.00	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3416	68.21	27.10	2.69	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	47.19	27.01	17.76	0.00	0.00	248	10.48	67.34	22.18	3,028	8.19	29	0
3418	0.94	47.77	51.30	0.00	0.00	91	47.25	8.79	43.96	1,817	5.01	95	1
3419	28.26	39.42	21.88	0.00	0.00	102	95.10	0.00	4.90	760	13.42	61	1
3420	59.66	28.33	3.29	0.00	0.00	99	0.00	34.34	65.66	510	19.41	45	0
3421	17.27	56.00	14.85	0.00	0.00	109	21.10	60.55	18.35	835	13.05	45	0
3525	97.33	0.89	0.00	0.00	0.00	289	0.00	44.64	55.36	2,149	13.45	43	35
3630	94.72	2.14	0.00	0.00	0.00	40	0.00	62.50	37.50	527	7.59	10	1
3731	99.24	0.00	0.00	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
3835	96.27	0.00	0.00	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	91.66	0.00	0.00	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
4222	92.86	3.44	0.00	0.00	0.00	257	0.00	72.76	27.24	2,217	11.59	70	2
4252	97.17	0.00	0.00	0.00	0.00	373	0.00	83.91	16.09	454	82.16	91	1
4256	64.04	0.71	0.00	0.00	0.00	105	0.00	76.19	23.81	804	13.06	100	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Petersburg

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	95.60	4.40	0.00	0.00	0.00	128	10.94	61.72	27.34	2,919	4.39	20	83
1105	94.54	0.00	5.46	0.00	0.00	5	0.00	0.00	100.00	6,033	0.08	40	3
1107	93.55	0.00	6.45	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1315	70.75	0.00	29.25	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1317	99.65	0.00	0.35	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1318	66.05	0.00	33.95	0.00	0.00	399	1.25	84.71	14.04	1,796	22.22	20	15
1319	23.14	0.00	76.86	0.00	0.00	195	4.62	77.44	17.95	2,857	6.83	26	30
1323	93.62	4.47	1.91	0.00	0.00	93	19.35	53.76	26.88	1,981	4.69	18	2
1332	85.89	0.00	14.11	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1420	1.94	0.00	92.63	5.44	0.00	115	4.35	29.57	66.09	1,035	11.11	23	53
1421	10.40	0.00	86.46	3.14	0.00	224	4.02	50.89	45.09	3,073	7.29	26	44
1422	39.09	0.00	60.91	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1525	20.29	0.00	79.71	0.00	0.00	24	0.00	79.17	20.83	2,397	1.00	9	86
1526	73.76	0.00	26.24	0.00	0.00	110	41.82	30.91	27.27	2,772	3.97	50	9
1527	38.29	15.02	46.09	0.60	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	0.91	21.31	66.81	8.18	2.79	51	45.10	54.90	0.00	378	13.49	51	15
1529	12.50	0.41	86.38	0.70	0.00	157	17.83	69.43	12.74	2,501	6.28	23	58
1530	28.25	18.50	51.81	1.11	0.33	196	7.14	64.29	28.57	1,861	10.53	20	55
1531	95.48	4.52	0.00	0.00	0.00	45	11.11	88.89	0.00	2,623	1.72	22	90
1601	59.81	0.00	37.15	2.86	0.17	0	0	0	0	1,398	0.00	0	0
1602	82.01	0.00	16.78	1.21	0.00	5	100.00	0.00	0.00	793	0.63	14	1
1603	74.58	1.03	24.19	0.20	0.00	5	100.00	0.00	0.00	624	0.80	54	2
1605	66.47	0.00	16.80	7.49	9.23	37	100.00	0.00	0.00	840	4.40	21	10
1706	90.92	0.72	7.78	0.59	0.00	9	100.00	0.00	0.00	280	3.21	42	0
1707	99.75	0.00	0.25	0.00	0.00	5	0.00	0.00	100.00	865	0.58	70	0
1708	99.90	0.00	0.10	0.00	0.00	0	0	0	0	969	0.00	55	0
1901	98.87	0.00	1.13	0.00	0.00	15	0.00	0.00	100.00	3,544	0.42	34	14
1904	54.98	0.00	29.46	8.73	6.83	122	7.38	92.62	0.00	627	19.46	93	47
1905	56.13	0.00	38.24	3.34	2.29	26	53.85	46.15	0.00	2,974	0.87	26	59
1906	32.69	0.00	67.31	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48
1910	97.09	0.00	2.91	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3
2007	10.47	0.00	53.58	21.81	14.14	0	0	0	0	2,811	0.00	32	58
2008	1.89	0.00	77.82	19.93	0.37	0	0	0	0	366	0.00	0	0
2926	99.87	0.00	0.13	0.00	0.00	9	0.00	100.00	0.00	472	1.91	18	1
2927	87.85	0.00	10.51	0.73	0.91	0	0	0	0	538	0.00	56	1
3001	96.01	1.33	2.67	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3002	95.32	0.00	4.68	0.00	0.00	638	0.00	92.32	7.68	861	74.10	33	12
3003	100.00	0.00	0.00	0.00	0.00	458	0.00	94.54	5.46	1,530	29.93	36	9
3104	94.85	4.13	1.02	0.00	0.00	133	0.00	96.24	3.76	3,070	4.33	86	31
3105	99.97	0.03	0.00	0.00	0.00	78	0.00	67.95	32.05	2,429	3.21	8	2
3308	88.87	0.00	9.90	1.23	0.00	187	14.97	47.59	37.43	3,160	5.92	26	36

Petersburg (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
3309	92.19	0.00	7.81	0.00	0.00	195	23.59	73.85	2.56	960	20.31	1	1
3310	94.53	0.00	5.47	0.00	0.00	365	1.37	97.26	1.37	1,174	31.09	19	11
3311	93.96	0.00	6.04	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	63.71	0.00	34.40	1.89	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	76.14	1.10	22.76	0.00	0.00	187	2.67	67.91	29.41	1,614	11.59	26	21
3314	96.56	0.00	3.44	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	28.28	0.00	52.50	19.22	0.00	216	61.57	36.11	2.31	1,328	16.27	33	11
3416	98.49	0.00	1.51	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	97.53	0.00	2.47	0.00	0.00	248	0.00	77.82	22.18	3,028	8.19	29	0
3523	N/U	N/U	N/U	N/U	N/U	156	8.97	84.62	6.41	1,342	11.62	96	22
3525	88.00	7.04	4.96	0.00	0.00	289	9.69	34.95	55.36	2,149	13.45	43	35
3526	85.89	0.00	14.11	0.00	0.00	286	0.00	31.47	68.53	1,213	23.58	77	35
3551	95.48	4.52	0.00	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3627	78.77	16.98	4.26	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22
3628	89.96	2.48	7.56	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	90.65	8.22	1.14	0.00	0.00	174	0.00	31.03	68.97	1,798	9.68	24	7
3731	72.63	0.00	17.83	9.54	0.00	107	42.99	38.32	18.69	1,149	9.31	21	3
3732	94.82	3.33	1.85	0.00	0.00	68	67.65	2.94	29.41	287	23.69	12	0
3734	N/U	N/U	N/U	N/U	N/U	152	18.42	52.63	28.95	2,026	7.50	13	0
3837	99.95	0.05	0.00	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
3938	34.09	0.59	46.30	9.83	9.20	238	25.21	28.57	46.22	3,159	7.53	33	0
3939	3.57	2.94	31.41	16.53	45.55	346	63.58	23.41	13.01	2,854	12.12	31	0
3940	11.17	0.47	50.03	16.29	22.04	157	70.06	23.57	6.37	2,580	6.09	29	5
4041	42.36	3.09	49.94	4.60	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6
4042	83.38	14.43	2.17	0.01	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4043	98.43	0.13	1.44	0.00	0.00	42	0.00	16.67	83.33	1,755	2.39	58	0
4044	97.23	2.57	0.20	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4054	96.08	3.92	0.00	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	23.62	0.01	38.97	23.13	14.26	75	18.67	61.33	20.00	2,616	2.87	28	2
4145	59.24	0.00	35.85	4.33	0.58	188	9.57	0.00	90.43	1,196	15.72	31	0
4146	71.97	0.00	21.35	6.68	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4147	97.89	0.00	2.11	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4148	20.14	3.81	46.99	26.66	2.40	264	6.82	1.89	91.29	1,678	15.73	31	7
4149	71.20	0.00	28.78	0.02	0.00	206	13.59	6.31	80.10	1,256	16.40	31	0
4253	98.81	1.19	0.00	0.00	0.00	200	0.00	82.50	17.50	1,026	19.49	80	12
5012	99.37	0.00	0.63	0.00	0.00	0	0	0	0	5,071	0.00	0	0
5013	97.82	0.00	2.17	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5014	98.40	0.00	1.60	0.00	0.00	0	0	0	0	2,357	0.00	0	0
5016	97.00	0.00	3.00	0.00	0.00	0	0	0	0	3,162	0.00	0	0
5017	98.32	0.00	1.68	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5018	96.05	0.00	3.95	0.00	0.00	0	0	0	0	1,558	0.00	0	0

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
5130	98.96	0.00	1.03	0.00	0.00	0	0	0	0	2,898	0.00	0	0
5131	95.60	0.00	4.40	0.00	0.00	1	0.00	100.00	0.00	1,392	0.07	21	32
5133	44.74	0.20	48.69	4.63	1.74	0	0	0	0	1,664	0.00	0	0
5134	60.86	0.00	36.50	1.78	0.86	0	0	0	0	3,617	0.00	12	9
5135	54.07	0.00	45.63	0.31	0.00	0	0	0	0	963	0.00	5	1
5136	70.47	0.00	22.87	3.89	2.76	0	0	0	0	1,014	0.00	0	0
5137	45.96	0.96	37.92	9.32	5.84	0	0	0	0	544	0.00	0	0
5138	51.01	0.12	28.59	17.45	2.84	0	0	0	0	1,550	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Point Baker

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds): 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	81.47	18.53	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1315	99.28	0.72	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1323	98.63	1.37	0.00	0.00	0.00	93	0.00	73.12	26.88	1,981	4.69	18	2
1420	97.24	2.76	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1422	98.25	1.75	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1524	62.79	37.21	0.00	0.00	0.00	0	0.00	0.00	0.00	726	0.00	100	1
1525	69.87	30.12	0.00	0.00	0.00	24	0.00	79.17	20.83	2,397	1.00	9	86
1526	52.58	47.42	0.00	0.00	0.00	110	5.45	67.27	27.27	2,772	3.97	50	9
1527	61.03	38.97	0.00	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	57.84	42.16	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	17.63	79.18	3.19	0.00	0.00	157	13.38	73.89	12.74	2,501	6.28	23	58
1530	84.90	15.10	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	54.28	45.72	0.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90
1602	99.54	0.46	0.00	0.00	0.00	5	0.00	100.00	0.00	793	0.63	14	1
1817	96.96	3.04	0.00	0.00	0.00	13	0.00	23.08	76.92	1,625	0.80	47	0
1901	95.71	4.29	0.00	0.00	0.00	15	0.00	0.00	100.00	3,544	0.42	34	14
1902	96.49	3.51	0.00	0.00	0.00	5	0.00	100.00	0.00	261	1.92	55	93
1904	88.27	11.73	0.00	0.00	0.00	122	0.00	100.00	0.00	627	19.46	93	47
1905	84.77	15.23	0.00	0.00	0.00	26	0.00	100.00	0.00	2,974	0.87	26	59
1906	70.98	29.02	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48
1910	76.18	23.82	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3
2202	98.73	1.27	0.00	0.00	0.00	4	0.00	100.00	0.00	136	2.94	40	0
2305	99.24	0.76	0.00	0.00	0.00	5	0.00	0.00	100.00	285	1.75	12	2
2514	99.25	0.75	0.00	0.00	0.00	0	0.00	0.00	0.00	289	0.00	48	2
2825	99.90	0.10	0.00	0.00	0.00	5	0.00	0.00	100.00	0	0.00	6	0
3551	97.27	2.73	0.00	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3733	98.41	1.59	0.00	0.00	0.00	122	0.00	100.00	0.00	1,798	6.79	6	0
3734	95.06	4.94	0.00	0.00	0.00	152	0.00	71.05	28.95	2,026	7.50	13	0
3835	95.96	4.04	0.00	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	92.47	7.53	0.00	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3938	71.44	28.56	0.00	0.00	0.00	238	0.00	53.78	46.22	3,159	7.53	33	0
3939	52.66	47.34	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	69.74	30.26	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
4145	96.45	3.55	0.00	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4146	81.76	18.24	0.00	0.00	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4147	89.57	10.43	0.00	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4148	72.67	27.33	0.00	0.00	0.00	264	0.00	8.71	91.29	1,678	15.73	31	7
4149	94.28	5.72	0.00	0.00	0.00	206	0.00	19.90	80.10	1,256	16.40	31	0
4150	74.07	25.93	0.00	0.00	0.00	291	0.00	1.72	98.28	891	32.66	53	0
4256	35.68	64.31	0.00	0.00	0.00	105	0.00	76.19	23.81	804	13.06	100	0
5012	100.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	5,071	0.00	0	0
5014	21.29	73.60	5.12	0.00	0.00	0	0.00	0.00	0.00	2,357	0.00	0	0

Point Baker (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds)					Total Deer Harvested	% Total Deer Harvested by:			Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
	0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds		This Community	Other Subsist	Non Subsist				
5015	3.27	96.73	0.00	0.00	0.00	0	0.00	0.00	0.00	1,313	0.00	0	0
5016	97.65	2.35	0.00	0.00	0.00	0	0.00	0.00	0.00	3,162	0.00	0	0
5017	57.78	42.22	0.00	0.00	0.00	0	0.00	0.00	0.00	7,820	0.00	0	0
5018	93.66	6.34	0.00	0.00	0.00	0	0.00	0.00	0.00	1,558	0.00	0	0
5130	86.57	13.43	0.00	0.00	0.00	0	0.00	0.00	0.00	2,898	0.00	0	0
5131	99.70	0.30	0.00	0.00	0.00	1	0.00	100.00	0.00	1,392	0.07	21	32
5134	64.58	35.42	0.00	0.00	0.00	0	0.00	0.00	0.00	3,617	0.00	12	9

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Gave (ADF&G)
1991 Revision database QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Port Alexander

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1525	89.62	10.38	0.00	0.00	0.00	24	0.00	79.17	20.83	2,395	1.00	9	86
1526	85.35	14.65	0.00	0.00	0.00	110	0.00	72.73	27.27	2,772	3.97	50	9
1527	59.62	40.38	0.00	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	80.44	19.56	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	20.02	79.98	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
3001	93.83	6.17	0.00	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3104	92.72	7.28	0.00	0.00	0.00	133	0.00	96.24	3.76	3,070	4.33	86	31
3206	78.85	21.15	0.00	0.00	0.00	186	0.00	100.00	0.00	1,017	18.29	19	6
3207	69.56	30.44	0.00	0.00	0.00	128	0.00	100.00	0.00	812	15.76	4	0
3312	71.03	28.97	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	91.33	8.67	0.00	0.00	0.00	187	0.00	70.59	29.41	11,614	1.61	26	21
3314	92.67	7.33	0.00	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	87.03	12.97	0.00	0.00	0.00	216	0.93	96.76	2.31	1,328	16.27	33	11
3731	88.73	11.27	0.00	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
3732	87.76	12.24	0.00	0.00	0.00	68	2.94	67.65	29.41	287	23.69	12	0
3733	74.17	25.80	0.03	0.00	0.00	122	9.84	90.16	0.00	1,798	6.79	6	0
3734	40.63	50.53	8.84	0.00	0.00	152	30.26	40.79	28.95	2,026	7.50	13	0
3940	99.17	0.83	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
5012	93.60	6.40	0.00	0.00	0.00	0	0	0	0	5,071	0.00	0	0
5013	61.46	38.54	0.00	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5014	58.27	41.73	0.00	0.00	0.00	0	0	0	0	2,357	0.00	0	0
5016	83.00	17.00	0.00	0.00	0.00	0	0	0	0	3,162	0.00	0	0
5017	64.99	35.01	0.00	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5018	11.08	88.92	0.00	0.00	0.00	0	0	0	0	1,558	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Port Protection

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	Percent Hab Cap Harvested	% WAA in Recreation Place	% WAA Roaded
1003	4.00	96.00	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1105	93.73	6.27	0.00	0.00	0.00	5	0.00	0.00	100.00	6,033	0.08	40	3
1107	99.14	0.86	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1108	99.87	0.13	0.00	0.00	0.00	6	0.00	100.00	0.00	3,866	0.16	44	1
1210	99.74	0.26	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1211	53.53	46.47	0.00	0.00	0.00	132	0.00	12.12	87.88	2,187	6.04	9	21
1212	92.17	7.83	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1213	44.41	55.59	0.00	0.00	0.00	10	0.00	0.00	100.00	1,197	0.84	50	1
1214	89.57	10.43	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	95.95	4.05	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	97.90	2.09	0.00	0.00	0.00	65	0.00	53.85	46.15	827	7.86	30	1
1317	93.24	6.76	0.00	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1421	93.43	6.57	0.00	0.00	0.00	224	0.00	54.91	45.09	3,073	7.29	26	44
1422	98.63	1.37	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1525	10.99	89.01	0.00	0.00	0.00	24	0.00	79.17	20.83	2,397	1.00	9	86
1526	20.14	78.23	1.62	0.00	0.00	110	0.00	72.73	27.27	2,772	3.97	50	9
1527	28.01	69.75	2.24	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	5.61	94.39	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	2.79	89.55	7.67	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	50.48	49.52	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	92.53	7.47	0.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90
1605	89.83	10.17	0.00	0.00	0.00	37	0.00	100.00	0.00	840	4.40	21	10
1706	98.63	1.37	0.00	0.00	0.00	9	0.00	100.00	0.00	280	3.21	42	0
1707	68.50	31.50	0.00	0.00	0.00	5	0.00	0.00	100.00	865	0.58	70	0
1708	93.93	6.07	0.00	0.00	0.00	0	0	0	0	969	0.00	55	0
1810	99.42	0.58	0.00	0.00	0.00	0	0	0	0	689	0.00	19	0
1817	43.80	56.20	0.00	0.00	0.00	13	0.00	23.08	76.92	1,625	0.80	47	0
1901	3.22	96.78	0.00	0.00	0.00	15	0.00	0.00	100.00	3,544	0.42	34	14
1902	19.42	80.58	0.00	0.00	0.00	5	0.00	100.00	0.00	261	1.92	55	93
1903	1.53	98.47	0.00	0.00	0.00	15	0.00	100.00	0.00	2,675	0.56	41	32
1905	0.18	99.82	0.00	0.00	0.00	26	0.00	100.00	0.00	2,974	0.87	26	59
1906	6.18	93.82	0.00	0.00	0.00	37	0.00	100.00	0.00	793	4.67	97	48
1910	11.99	88.01	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3
3207	99.36	0.64	0.00	0.00	0.00	128	0.00	100.00	0.00	812	15.76	4	0
3308	94.72	5.28	0.00	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3309	87.86	12.14	0.00	0.00	0.00	195	0.00	97.44	2.56	960	20.31	1	1
3310	87.09	12.91	0.00	0.00	0.00	365	0.00	98.63	1.37	1,174	31.09	19	11
3311	94.18	5.82	0.00	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	92.81	7.19	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	92.00	8.00	0.00	0.00	0.00	187	0.00	70.59	29.41	1,614	11.59	26	21
3315	92.87	7.13	0.00	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11

3419	94.17	5.83	0.00	0.00	0.00	102	0.00	95.10	4.90	760	13.42	61	1

Port Protection (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	Percent Hab Cap Harvested	% WAA in Recreation Place	% WAA Roaded
3731	95.95	4.05	0.00	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
3733	98.66	1.34	0.00	0.00	0.00	122	0.00	100.00	0.00	1,798	6.79	6	0
3734	89.45	10.55	0.00	0.00	0.00	152	0.00	71.05	28.95	2,026	7.50	13	0
3938	70.89	29.11	0.00	0.00	0.00	238	0.00	53.78	46.22	3,159	7.53	33	0
3939	66.35	33.65	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	85.40	14.60	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
4044	99.99	0.01	0.00	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4145	84.88	15.12	0.00	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4146	50.92	49.08	0.00	0.00	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4147	79.65	20.34	0.00	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4148	66.04	33.96	0.00	0.00	0.00	264	0.00	8.71	91.29	1,678	15.73	31	7
4149	80.52	19.48	0.00	0.00	0.00	206	0.00	19.90	80.10	1,256	16.40	31	0
4150	99.71	0.29	0.00	0.00	0.00	291	0.00	1.72	98.28	891	32.66	53	0
5013	98.52	1.48	0.00	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5014	15.97	84.03	0.00	0.00	0.00	0	0	0	0	2,357	0.00	0	0
5016	91.98	8.02	0.00	0.00	0.00	0	0	0	0	3,162	0.00	0	0
5017	74.14	25.86	0.00	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5018	44.36	55.64	0.00	0.00	0.00	0	0	0	0	1,558	0.00	0	0
5130	63.76	36.24	0.00	0.00	0.00	0	0	0	0	2,898	0.00	0	0
5131	94.04	5.96	0.00	0.00	0.00	1	0.00	100.00	0.00	1,392	0.07	21	32
5134	66.94	33.06	0.00	0.00	0.00	0	0	0	0	3,617	0.00	12	9
5136	99.83	0.17	0.00	0.00	0.00	0	0	0	0	1,014	0.00	0	0
5137	87.85	12.15	0.00	0.00	0.00	0	0	0	0	544	0.00	0	0
5138	91.90	8.10	0.00	0.00	0.00	0	0	0	0	1,550	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Saxman

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	3.84	96.16	0.00	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1105	99.88	0.12	0.00	0.00	0.00	5	0.00	0.00	100.00	6,033	0.08	40	3
1107	96.78	3.22	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1210	98.70	1.30	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1211	99.66	0.34	0.00	0.00	0.00	132	0.00	12.12	87.88	2,187	6.04	9	21
1212	98.56	1.44	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1213	88.76	11.24	0.00	0.00	0.00	10	0.00	0.00	100.00	1,197	0.84	50	1
1214	97.76	2.24	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	84.45	15.55	0.00	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	90.74	9.26	0.00	0.00	0.00	65	0.00	53.85	46.15	827	7.86	30	1
1317	93.36	6.64	0.00	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1318	89.60	10.40	0.00	0.00	0.00	399	0.00	85.96	14.04	1,796	22.22	20	15
1319	76.63	23.37	0.00	0.00	0.00	195	0.00	82.05	17.95	2,857	6.83	26	30
1323	89.89	10.11	0.00	0.00	0.00	93	0.00	73.12	26.88	1,981	4.69	18	2
1332	93.61	6.39	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1420	89.56	10.44	0.00	0.00	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	79.64	20.36	0.00	0.00	0.00	224	0.00	54.91	45.09	3,073	7.29	26	44
1422	68.79	31.21	0.00	0.00	0.00	375	0.00	67.73	32.27	4,412	8.50	23	58
1525	94.69	5.31	0.00	0.00	0.00	24	0.00	79.17	20.83	2,397	1.00	9	86
1527	82.67	17.33	0.00	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	91.44	8.56	0.00	0.00	0.00	51	0.00	100.00	0.00	378	13.49	51	15
1529	83.16	16.84	0.00	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	74.03	25.97	0.00	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	10.36	89.64	0.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90
1816	99.22	0.78	0.00	0.00	0.00	0	0	0	0	716	0.00	0	0
1817	86.94	13.06	0.00	0.00	0.00	13	0.00	23.08	76.92	1,625	0.80	47	0
1910	100.00	0.00	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).

Sitka

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1318	N/U	N/U	N/U	N/U	N/U	399	1.25	84.71	14.04	1,796	22.22	20	15
2306	N/U	N/U	N/U	N/U	N/U	11	100.00	0.00	0.00	165	6.67	27	15
3001	11.27	9.07	33.81	21.08	24.77	553	93.31	0.54	6.15	3,408	16.23	69	19
3002	19.58	12.44	36.27	19.71	12.00	638	91.85	0.47	7.68	861	74.10	33	12
3003	23.72	14.03	45.52	11.77	4.95	458	93.01	1.53	5.46	1,530	29.93	36	9
3104	0.30	7.98	68.46	13.46	9.79	133	96.24	0.00	3.76	3,070	4.33	86	31
3105	27.94	13.37	45.15	7.71	5.83	78	67.95	0.00	32.05	2,429	3.21	8	2
3206	33.37	14.31	38.36	13.43	0.53	186	100.00	0.00	0.00	1,017	18.29	19	6
3207	32.56	24.52	38.46	4.22	0.24	128	100.00	0.00	0.00	812	15.76	4	0
3308	17.22	20.22	56.21	5.69	0.65	187	22.99	39.57	37.43	3,160	5.92	26	36
3309	31.63	38.01	23.37	5.88	1.11	195	73.85	23.59	2.56	960	20.31	1	1
3310	16.35	25.69	29.41	21.53	7.02	365	90.41	8.22	1.37	1,174	31.09	19	11
3311	14.48	29.06	45.43	5.74	5.29	306	90.52	6.21	3.27	1,443	21.21	27	2
3312	0.05	23.20	49.95	18.65	8.15	154	96.75	0.00	3.25	473	32.56	25	7
3313	20.26	26.85	47.64	4.37	0.87	187	62.57	8.02	29.41	1,614	11.59	26	21
3314	20.76	22.95	31.03	15.40	9.86	135	90.37	2.22	7.41	926	14.58	46	13
3315	20.95	16.24	61.42	1.39	0.00	216	12.50	85.19	2.31	1,328	16.27	33	11
3416	14.21	24.81	59.92	1.06	0.00	96	100.00	0.00	0.00	1,821	5.27	7	0
3417	47.13	22.73	30.14	0.00	0.00	248	62.10	15.73	22.18	3,028	8.19	29	0
3418	65.25	26.69	8.06	0.00	0.00	91	0.00	56.04	43.96	1,817	5.01	95	1
3419	79.61	14.04	5.48	0.87	0.00	102	0.00	95.10	4.90	760	13.42	61	1
3420	92.44	7.56	0.00	0.00	0.00	99	0.00	34.34	65.66	510	19.41	45	0
3421	77.04	22.96	0.00	0.00	0.00	109	0.00	81.65	18.35	835	13.05	45	0
3523	95.36	4.04	0.59	0.00	0.00	156	0.00	93.59	6.41	1,342	11.62	96	22
3524	N/U	N/U	N/U	N/U	N/U	289	3.81	71.97	24.22	260	111.15	30	4
3525	63.10	18.60	18.30	0.00	0.00	289	7.27	37.37	55.36	2,149	13.45	43	35
3526	77.57	20.62	1.81	0.00	0.00	286	3.85	27.62	68.53	1,213	23.58	77	35
3551	96.43	3.48	0.10	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3627	58.12	33.26	8.62	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22
3628	57.74	39.95	2.31	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	76.55	16.90	6.55	0.00	0.00	174	0.00	31.03	68.97	1,798	9.68	24	7
3630	95.19	4.81	0.00	0.00	0.00	40	0.00	62.50	37.50	527	7.59	10	1
3731	68.46	15.21	16.33	0.00	0.00	107	19.63	61.68	18.69	1,149	9.31	21	3
3732	86.60	11.49	1.92	0.00	0.00	68	0.00	70.59	29.41	287	23.69	12	0
3733	62.08	19.79	17.58	0.55	0.00	122	48.36	51.64	0.00	1,798	6.79	6	0
3734	68.83	25.56	5.61	0.00	0.00	152	10.53	60.53	28.95	2,026	7.50	13	0
3837	99.98	0.02	0.00	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
3938	96.98	3.02	0.00	0.00	0.00	238	6.72	47.06	46.22	3,159	7.53	33	0
3939	83.81	15.19	1.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	88.08	11.92	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
4041	90.39	8.32	1.29	0.00	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6

Sitka (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
4042	68.09	25.55	6.36	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4043	90.77	7.57	1.66	0.00	0.00	42	0.00	16.67	83.33	1,755	2.39	58	0
4044	92.38	5.75	1.87	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4054	95.65	4.08	0.26	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	43.47	37.53	19.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
4145	71.13	24.43	4.44	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4146	89.31	9.91	0.77	0.00	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4147	98.67	1.32	0.00	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4148	89.08	9.89	1.03	0.00	0.00	264	0.00	8.71	91.29	1,678	15.73	31	7
4149	97.15	2.85	0.00	0.00	0.00	206	0.00	19.90	80.10	1,256	16.40	31	0
4150	N/U	N/U	N/U	N/U	N/U	291	1.72	0.00	98.28	891	32.66	53	0
4222	51.71	48.29	0.00	0.00	0.00	257	0.00	72.76	27.24	2,217	11.59	70	2
4252	99.06	0.94	0.00	0.00	0.00	373	0.00	83.91	16.09	454	82.16	91	1
4253	93.97	6.03	0.00	0.00	0.00	200	0.00	82.50	17.50	1,026	19.49	80	12
5012	89.95	10.05	0.00	0.00	0.00	0	0	0	0	5,071	0.00	0	0
5013	92.27	7.73	0.00	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5014	99.61	0.39	0.00	0.00	0.00	0	0	0	0	2,357	0.00	0	0
5016	64.47	28.55	6.98	0.00	0.00	0	0	0	0	3,162	0.00	0	0
5017	82.93	15.94	1.13	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5132	98.88	1.12	0.00	0.00	0.00	0	0	0	0	982	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Skagway

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA In Recreation Place	% WAA Roaded
2304	95.00	5.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0	0.00	0	0
3310	N/U	N/U	N/U	N/U	N/U	365	4.38	94.25	1.37	1,174	31.09	19	11
3523	98.00	52.00	0.00	0.00	0.00	156	0.00	93.59	6.41	1,342	11.62	96	22
3524	0.00	100.00	0.00	0.00	0.00	289	0.00	75.78	24.22	260	111.15	30	4
3525	51.00	48.00	0.00	0.00	0.00	289	0.00	44.64	55.36	2,149	13.45	43	35
3526	90.00	10.00	0.00	0.00	0.00	286	1.40	30.07	68.53	1,213	23.58	77	35
3627	92.00	8.00	0.00	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22
3629	76.00	24.00	0.00	0.00	0.00	174	10.92	20.11	68.97	1,798	9.68	24	7
3835	92.00	8.00	0.00	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	95.00	5.00	0.00	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3938	99.67	0.33	0.00	0.00	0.00	238	0.00	53.78	46.22	3,159	7.53	33	0
3939	66.24	33.75	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
4042	82.00	18.00	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4043	95.00	5.00	0.00	0.00	0.00	42	0.00	16.67	83.33	1,755	2.39	58	0
4044	96.00	3.99	0.00	0.00	0.00	199	1.51	43.22	55.28	1,315	15.13	4	0
4054	98.00	2.00	0.00	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	97.00	3.00	0.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
4222	97.00	3.00	0.00	0.00	0.00	257	2.33	70.43	27.24	2,217	11.59	70	2
4252	55.00	95.00	0.00	0.00	0.00	373	0.00	83.91	16.09	454	82.16	91	1
4253	84.00	16.00	0.00	0.00	0.00	200	0.50	82.00	17.50	1,026	19.49	80	12

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Tenakee Springs

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
2305	99.31	0.69	0.00	0.00	0.00	5	0.00	0.00	100.00	285	1.75	12	2
2306	95.14	4.86	0.00	0.00	0.00	11	0.00	100.00	0.00	165	6.67	27	15
2621	N/U	N/U	N/U	N/U	N/U	104	3.85	0.00	96.15	166	62.65	44	0
2722	90.47	9.53	0.00	0.00	0.00	321	0.00	0.00	100.00	796	40.33	78	4
3001	91.33	8.67	0.00	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3104	99.90	0.10	0.00	0.00	0.00	133	0.00	96.24	3.76	3,070	4.33	86	31
3206	96.72	3.28	0.00	0.00	0.00	186	0.00	100.00	0.00	1,017	18.29	19	6
3207	91.66	8.34	0.00	0.00	0.00	128	0.00	100.00	0.00	812	15.76	4	0
3308	34.09	65.00	0.91	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3309	97.38	2.63	0.00	0.00	0.00	195	0.00	97.44	2.56	960	20.31	1	1
3310	85.29	14.72	0.00	0.00	0.00	365	0.00	98.63	1.37	1,174	31.09	19	11
3311	94.81	5.19	0.00	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	85.10	14.90	0.00	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	52.59	47.41	0.00	0.00	0.00	187	0.00	70.59	29.41	1,614	11.59	26	21
3314	68.17	31.83	0.00	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	71.96	28.04	0.00	0.00	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3416	87.79	12.21	0.00	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	99.61	0.39	0.00	0.00	0.00	248	0.00	77.82	22.18	3,028	8.19	29	0
3523	66.46	33.41	0.14	0.00	0.00	156	0.00	93.59	6.41	1,342	11.62	96	22
3524	96.58	3.42	0.00	0.00	0.00	289	0.00	75.78	24.22	260	111.15	30	4
3525	24.30	73.86	1.84	0.00	0.00	289	3.46	41.18	55.36	2,149	13.45	43	35
3526	2.15	65.06	32.79	0.00	0.00	286	17.13	14.34	68.53	1,213	23.58	77	35
3551	88.22	11.78	0.00	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3627	0.24	81.59	18.17	0.00	0.00	95	2.11	29.47	68.42	899	10.57	33	22
3628	60.49	27.25	12.26	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	44.20	43.72	12.08	0.00	0.00	174	10.34	20.69	68.97	1,798	9.68	24	7
3630	71.84	24.29	3.87	0.00	0.00	40	0.00	62.50	37.50	527	7.59	10	1
3731	91.31	8.69	0.00	0.00	0.00	107	0.00	81.31	18.69	1,149	9.31	21	3
3732	93.91	6.09	0.00	0.00	0.00	68	0.00	70.59	29.41	287	23.69	12	0
3733	94.06	5.94	0.00	0.00	0.00	122	0.00	100.00	0.00	1,798	6.79	6	0
3734	85.03	14.97	0.00	0.00	0.00	152	0.00	71.05	28.95	2,026	7.50	13	0
3835	98.77	1.23	0.00	0.00	0.00	227	0.00	2.64	97.36	1,080	21.02	42	0
3836	94.21	5.79	0.00	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3837	98.48	1.52	0.00	0.00	0.00	114	0.00	3.51	96.49	1,233	9.25	4	3
3939	82.54	17.46	0.00	0.00	0.00	346	0.00	86.99	13.01	2,854	12.12	31	0
3940	82.74	17.26	0.00	0.00	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
4041	82.25	17.75	0.00	0.00	0.00	43	0.00	65.12	34.88	2,165	1.99	20	6
4042	97.14	2.86	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4044	87.73	12.26	0.00	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4054	83.69	16.31	0.00	0.00	0.00	12	0.00	58.33	41.67	2,266	0.53	4	0
4055	89.06	10.94	0.00	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2

Tenakee Springs (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
4222	97.31	2.69	0.00	0.00	0.00	257	0.00	72.76	27.24	2,217	11.59	70	2
4252	96.97	3.03	0.00	0.00	0.00	373	0.00	83.91	16.09	454	82.16	91	1
4253	98.86	1.14	0.00	0.00	0.00	200	0.00	82.50	17.50	1,026	19.49	80	12
4256	35.68	64.31	0.00	0.00	0.00	105	0.00	76.19	23.81	804	13.06	100	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Thorne Bay

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
510	N/U	N/U	N/U	N/U	N/U	56	35.71	19.64	44.64	1,947	2.88	35	28
1003	3.84	76.30	19.87	0.00	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1107	98.76	1.24	0.00	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1210	100.00	0.00	0.00	0.00	0.00	20	0.00	0.00	100.00	2,600	0.77	41	1
1214	100.00	0.00	0.00	0.00	0.00	81	16.05	20.99	62.96	1,749	4.63	42	17
1315	34.45	42.87	21.28	1.40	0.00	92	64.13	8.70	27.17	2,838	3.24	20	58
1316	87.44	12.53	0.03	0.00	0.00	65	0.00	53.85	46.15	827	7.86	30	1
1317	76.80	23.20	0.00	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1318	52.05	44.75	3.19	0.00	0.00	399	8.27	77.69	14.04	1,796	22.22	20	15
1319	18.62	59.56	21.54	0.27	0.00	195	56.92	25.13	17.95	2,857	6.83	26	30
1323	92.60	5.79	1.61	0.00	0.00	93	7.53	65.59	26.88	1,981	4.69	18	2
1332	84.24	15.76	0.00	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1420	20.75	56.75	22.51	0.00	0.00	115	6.09	27.83	66.09	1,035	11.11	23	53
1421	50.51	36.98	12.51	0.00	0.00	224	8.93	45.98	45.09	3,073	7.29	26	44
1422	31.06	33.42	35.52	0.00	0.00	375	17.33	50.40	32.27	4,412	8.50	23	58
1526	96.98	3.02	0.00	0.00	0.00	110	0.00	72.73	27.27	2,772	3.97	50	9
1527	70.77	20.92	8.31	0.00	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	84.83	13.97	1.21	0.00	0.00	51	13.73	86.27	0.00	378	13.49	51	15
1529	75.24	16.32	8.45	0.00	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	63.62	26.40	9.98	0.00	0.00	196	0.00	71.43	28.57	1,861	10.53	20	55
1531	46.47	53.53	0.00	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90
1816	98.87	1.13	0.00	0.00	0.00	0	0	0	0	716	0.00	0	0
1817	76.33	23.67	0.00	0.00	0.00	13	0.00	23.08	76.92	1,625	0.80	47	0
1910	93.82	6.18	0.00	0.00	0.00	15	0.00	100.00	0.00	3,588	0.42	26	3
2926	100.00	0.00	0.00	0.00	0.00	9	0.00	100.00	0.00	472	1.91	18	1
3003	N/U	N/U	N/U	N/U	N/U	458	1.53	93.01	5.46	1,530	29.93	36	9

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Wrangell

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1003	3.30	1.11	95.39	0.20	0.00	128	0.00	72.66	27.34	2,919	4.39	20	83
1107	94.71	4.99	0.30	0.00	0.00	49	0.00	48.98	51.02	6,915	0.71	27	15
1209	53.53	46.47	0.00	0.00	0.00	0	0	0	0	4,010	0.00	23	1
1211	100.00	0.00	0.00	0.00	0.00	132	0.00	12.12	87.88	2,187	6.04	9	21
1212	88.76	11.24	0.00	0.00	0.00	46	0.00	0.00	100.00	1,362	3.38	75	1
1214	99.36	0.64	0.00	0.00	0.00	81	0.00	37.04	62.96	1,749	4.63	42	17
1315	83.26	12.60	4.14	0.00	0.00	92	0.00	72.83	27.17	2,838	3.24	20	58
1316	N/U	N/U	N/U	N/U	N/U	65	7.69	46.15	46.15	827	7.86	30	1
1317	87.96	2.68	9.36	0.00	0.00	74	0.00	86.49	13.51	1,093	6.77	44	33
1318	84.84	6.21	8.94	0.00	0.00	399	1.25	84.71	14.04	1,796	22.22	20	15
1319	86.35	8.69	4.96	0.00	0.00	195	7.69	74.36	17.95	2,857	6.83	26	30
1323	55.35	30.20	14.46	0.00	0.00	93	5.38	67.74	26.88	1,981	4.69	18	2
1332	89.40	0.00	10.60	0.00	0.00	23	0.00	78.26	21.74	2,805	0.82	38	16
1420	63.11	14.82	22.00	0.07	0.00	115	0.00	33.91	66.09	1,035	11.11	23	53
1421	69.80	13.02	17.17	0.00	0.00	224	0.00	54.91	45.09	3,073	7.29	26	44
1422	50.07	27.68	22.25	0.00	0.00	375	1.33	66.40	32.27	4,412	8.50	23	58
1524	1.00	99.00	0.00	0.00	0.00	0	0	0	0	726	0.00	100	1
1525	43.65	46.83	9.52	0.00	0.00	24	20.83	58.33	20.83	2,397	1.00	9	86
1526	48.10	15.60	36.22	0.08	0.00	110	4.55	68.18	27.27	2,772	3.97	50	9
1527	56.04	17.14	26.55	0.28	0.00	12	0.00	100.00	0.00	1,730	0.69	37	45
1528	45.76	6.58	26.41	14.16	7.09	51	0.00	100.00	0.00	378	13.49	51	15
1529	61.68	12.96	23.07	2.29	0.00	157	0.00	87.26	12.74	2,501	6.28	23	58
1530	36.25	10.84	45.78	4.39	2.74	196	31.12	40.31	28.57	1,861	10.53	20	55
1531	8.02	1.16	90.82	0.00	0.00	45	0.00	100.00	0.00	2,623	1.72	22	90
1602	98.54	1.00	0.46	0.00	0.00	5	0.00	100.00	0.00	793	0.63	14	1
1603	99.47	0.53	0.00	0.00	0.00	5	0.00	100.00	0.00	624	0.80	54	2
1605	90.12	4.69	5.19	0.00	0.00	37	0.00	100.00	0.00	840	4.40	21	10
1706	91.88	1.67	6.45	0.00	0.00	9	0.00	100.00	0.00	280	3.21	42	0
1707	72.07	1.99	25.40	0.54	0.00	5	0.00	0.00	100.00	865	0.58	70	0
1708	89.54	6.92	3.54	0.00	0.00	0	0	0	0	969	0.00	55	0
1810	31.84	29.80	36.30	1.96	0.10	0	0	0	0	689	0.00	19	0
1811	73.22	11.02	13.78	1.65	0.34	0	0	0	0	685	0.00	0	0
1812	87.84	8.51	3.65	0.00	0.00	0	0	0	0	812	0.00	0	0
1813	97.45	1.06	1.49	0.00	0.00	0	0	0	0	250	0.00	0	0
1814	90.78	6.48	2.74	0.00	0.00	0	0	0	0	365	0.00	0	0
1815	83.31	15.83	0.86	0.00	0.00	0	0	0	0	333	0.00	0	0
1816	76.71	13.62	9.67	0.00	0.00	0	0	0	0	716	0.00	0	0
1817	64.83	25.91	9.25	0.00	0.00	13	0.00	23.08	76.92	1,625	0.80	47	0
1901	7.98	35.77	50.69	4.51	1.05	15	0.00	0.00	100.00	3,544	0.42	34	14
1902	1.53	0.99	91.36	6.11	0.00	5	100.00	0.00	0.00	261	1.92	55	93
1903	0.96	0.22	2.86	53.07	42.90	15	100.00	0.00	0.00	2,675	0.56	41	32

Wrangell (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
1904	1.05	0.00	0.63	0.00	98.32	122	92.62	7.38	0.00	627	19.46	93	47
1905	0.18	0.00	76.56	17.04	6.22	26	19.23	80.77	0.00	2,974	0.87	26	59
1906	6.18	0.00	3.24	13.34	77.25	37	83.78	16.22	0.00	793	4.67	97	48
1910	15.97	30.68	40.93	12.03	0.39	15	100.00	0.00	0.00	3,588	0.42	26	3
2007	27.80	8.57	61.82	1.81	0.00	0	0	0	0	2,811	0.00	32	58
2008	3.46	72.14	24.40	0.00	0.00	0	0	0	0	366	0.00	0	0
2202	97.28	2.72	0.00	0.00	0.00	4	0.00	100.00	0.00	136	2.94	40	0
2304	92.44	7.56	0.00	0.00	0.00	0	0	0	0	0	0	0	0
2305	93.83	6.17	0.00	0.00	0.00	5	0.00	0.00	100.00	285	1.75	12	2
2722	94.95	0.00	5.05	0.00	0.00	321	0.00	0.00	100.00	796	40.33	78	4
2926	94.67	5.33	0.00	0.00	0.00	9	0.00	100.00	0.00	472	1.91	18	1
2927	99.96	0.04	0.00	0.00	0.00	0	0	0	0	538	0.00	56	1
3001	50.63	5.12	44.25	0.00	0.00	553	0.00	93.85	6.15	3,408	16.23	69	19
3002	89.28	6.29	4.43	0.00	0.00	638	0.00	92.32	7.68	861	74.10	33	12
3003	100.00	0.00	0.00	0.00	0.00	458	0.00	94.54	5.46	1,530	29.93	36	9
3104	64.38	24.52	11.10	0.00	0.00	133	0.00	96.24	3.76	3,070	4.33	86	31
3105	97.40	2.60	0.00	0.00	0.00	78	0.00	67.95	32.05	2,429	3.21	8	2
3308	35.16	56.04	8.80	0.00	0.00	187	0.00	62.57	37.43	3,160	5.92	26	36
3309	65.29	34.71	0.00	0.00	0.00	195	0.00	97.44	2.56	960	20.31	1	1
3310	61.32	20.98	17.70	0.00	0.00	365	0.00	98.63	1.37	1,174	31.09	19	11
3311	52.65	38.03	9.32	0.00	0.00	306	0.00	96.73	3.27	1,443	21.21	27	2
3312	65.84	13.52	20.64	0.00	0.00	154	0.00	96.75	3.25	473	32.56	25	7
3313	70.91	10.78	18.31	0.00	0.00	187	0.00	70.59	29.41	1,614	11.59	26	21
3314	72.94	13.35	13.71	0.00	0.00	135	0.00	92.59	7.41	926	14.58	46	13
3315	30.20	46.76	22.92	0.13	0.00	216	0.00	97.69	2.31	1,328	16.27	33	11
3416	4.74	95.26	0.00	0.00	0.00	96	0.00	100.00	0.00	1,821	5.27	7	0
3417	52.76	47.24	0.00	0.00	0.00	248	0.00	77.82	22.18	3,028	8.19	29	0
3418	96.59	3.41	0.00	0.00	0.00	91	0.00	56.04	43.96	1,817	5.01	95	1
3419	97.20	2.80	0.00	0.00	0.00	102	0.00	95.10	4.90	760	13.42	61	1
3523	75.20	14.75	10.04	0.00	0.00	156	0.00	93.59	6.41	1,342	11.62	96	22
3524	26.76	63.74	9.50	0.00	0.00	289	0.00	75.78	24.22	260	111.15	30	4
3525	80.05	18.51	1.44	0.00	0.00	289	0.00	44.64	55.36	2,149	13.45	43	35
3526	71.87	28.10	0.03	0.00	0.00	286	0.00	31.47	68.53	1,213	23.58	77	35
3551	68.11	26.24	5.65	0.00	0.00	307	0.00	73.94	26.06	1,768	17.36	0	0
3627	15.38	70.89	13.72	0.00	0.00	95	0.00	31.58	68.42	899	10.57	33	22
3628	86.72	12.49	0.80	0.00	0.00	10	0.00	0.00	100.00	1,093	0.91	18	7
3629	67.61	32.39	0.00	0.00	0.00	174	0.00	31.03	68.97	1,798	9.68	24	7
3630	96.82	3.18	0.00	0.00	0.00	40	0.00	62.50	37.50	527	7.59	10	1
3731	69.10	5.36	24.50	1.05	0.00	107	18.69	62.62	18.69	1,149	9.31	21	3
3732	87.46	8.98	3.57	0.00	0.00	68	0.00	70.59	29.41	287	23.69	12	0
3733	84.21	10.64	5.15	0.00	0.00	122	37.70	62.30	0.00	1,798	6.79	6	0

Wrangell (continued)

Wildlife Analysis Area	% WAA Used by Number of Households (H.holds) 0 H.holds	1 - 10 H.holds	11 - 50 H.holds	51 - 100 H.holds	> 100 H.holds	Total Deer Harvested	% Total Deer Harvested by: This Community	Other Subsist	Non Subsist	Deer Habitat Capability	% Habitat Capability Harvested	% WAA in Recreation Place	% WAA Roaded
3734	77.39	22.20	0.41	0.00	0.00	152	6.58	64.47	28.95	2,026	7.50	13	0
3836	95.00	5.00	0.00	0.00	0.00	334	0.00	2.40	97.60	1,812	18.43	99	3
3938	42.47	16.71	29.54	11.15	0.13	238	4.20	49.58	46.22	3,159	7.53	33	0
3939	20.61	28.69	41.49	8.90	0.30	346	1.45	85.55	13.01	2,854	12.12	31	0
3940	37.73	26.62	33.61	2.03	0.00	157	0.00	93.63	6.37	2,580	6.09	29	5
4041	67.75	11.40	19.72	1.13	0.00	43	11.63	53.49	34.88	2,165	1.99	20	6
4042	78.26	21.74	0.00	0.00	0.00	79	0.00	87.34	12.66	2,626	3.01	25	0
4044	97.89	2.11	0.00	0.00	0.00	199	0.00	44.72	55.28	1,315	15.13	4	0
4055	84.91	6.35	8.74	0.00	0.00	75	0.00	80.00	20.00	2,616	2.87	28	2
4145	70.32	20.45	9.23	0.00	0.00	188	0.00	9.57	90.43	1,196	15.72	31	0
4146	72.06	15.01	12.93	0.00	0.00	75	0.00	0.00	100.00	824	9.10	32	0
4147	51.35	48.65	0.00	0.00	0.00	170	0.00	0.00	100.00	942	18.05	41	0
4148	5.98	40.68	53.33	0.00	0.00	264	0.00	8.71	91.29	1,678	15.73	31	7
4150	27.21	72.79	0.00	0.00	0.00	291	0.00	1.72	98.28	891	32.66	53	0
4252	88.42	9.62	1.96	0.00	0.00	373	0.00	83.91	16.09	454	82.16	91	1
4253	72.44	16.44	11.12	0.00	0.00	200	0.00	82.50	17.50	1,026	19.49	80	12
5012	76.68	21.62	1.70	0.00	0.00	0	0	0	0	5,071	0.00	0	0
5013	82.83	17.17	0.00	0.00	0.00	0	0	0	0	2,197	0.00	0	0
5014	28.61	28.84	42.54	0.00	0.00	0	0	0	0	2,357	0.00	0	0
5016	98.94	1.00	0.05	0.00	0.00	0	0	0	0	3,162	0.00	0	0
5017	40.34	54.30	5.36	0.00	0.00	0	0	0	0	7,820	0.00	0	0
5018	74.51	12.44	13.05	0.00	0.00	0	0	0	0	1,558	0.00	0	0
5130	87.88	10.87	1.24	0.00	0.00	0	0	0	0	2,898	0.00	0	0
5131	90.18	4.54	5.27	0.00	0.00	1	0.00	100.00	0.00	1,392	0.07	21	32
5133	90.62	1.63	7.75	0.00	0.00	0	0	0	0	1,664	0.00	0	0
5134	66.43	8.22	20.17	5.18	0.00	0	0	0	0	3,617	0.00	12	9
5135	99.25	0.74	0.00	0.00	0.00	0	0	0	0	963	0.00	5	1
5136	66.33	24.68	8.99	0.00	0.00	0	0	0	0	1,014	0.00	0	0
5137	98.67	0.00	1.33	0.00	0.00	0	0	0	0	544	0.00	0	0
5138	79.32	3.42	17.26	0.00	0.00	0	0	0	0	1,550	0.00	0	0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game (ADF&G)
1991 Revision data base QODHEW, Q1014, Q1015

Notes: Wildlife Analysis Areas displayed include those ever hunted by this community (TRUCS) and/or those where deer were actually harvested (ADF&G).
N/U = Not Used according to TRUCS

Yakutat

There is no information regarding all the Wildlife Analysis Areas that Yakutat residents have ever used for hunting.
Information about Wildlife Analysis Areas successfully hunted by Yakutat residents is presented elsewhere in this appendix.

Competition, Abundance and Distribution of Deer by Alternative for the First, Second and Fifth Decades for Wildlife Analysis Areas Successfully Hunted by Subsistence Community Households

Angoon

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
3308	46	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3313	10	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3315	49	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3627	10	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3940	7	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	23	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	69	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	7	7	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4044	10	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	7	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	46	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
Total	284	897	1,292	21,411	21,185	20,480	21,420	21,213	21,129	21,057	20,307	20,946	20,541	20,417	20,318	19,980	19,796	20,042
	10 Percent of Habitat Capability =			2,141	2,119	2,048	2,142	2,121	2,113	2,106	2,031	2,095	2,054	2,042	2,032	1,998	1,980	2,004

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Coffman Cove

WAA	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
1108	6	6	6	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866
1420	27	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	48	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	6	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1527	6	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1530	33	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
Total	126	574	928	15,672	15,795	14,759	15,059	15,127	14,342	13,897	13,451	13,605	14,075	12,272	11,856	11,285	10,010	11,344
10 Percent Deer Habitat Capability =				1,567	1,580	1,476	1,506	1,513	1,434	1,390	1,345	1,361	1,408	1,227	1,186	1,129	1,001	1,134

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

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Craig

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
408	7	7	58	478	478	478	478	478	478	478	478	478	478	478	478	478	476	478
901	7	13	18	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,216	2,237	1,574	1,537	1,262	1,392	1,461
902	13	20	20	6,296	6,296	6,296	6,270	6,296	6,296	6,296	6,278	6,270	6,296	6,243	6,243	6,170	6,148	6,296
1003	60	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1315	7	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	20	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	60	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	168	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	7	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	27	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	7	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1421	20	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	134	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1526	13	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1529	13	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1531	7	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
Total	570	1,527	2,076	39,388	39,524	37,837	38,007	39,358	37,625	36,974	35,314	35,213	36,690	32,294	31,182	28,852	27,498	29,079
	10 Percent of Habitat Capability =			3,939	3,952	3,784	3,801	3,936	3,763	3,697	3,531	3,521	3,669	3,229	3,118	2,885	2,750	2,908

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

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Edna Bay

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1525	11	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	5	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1531	14	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
3734	8	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
Total	38	252	331	8,405	8,406	7,986	7,327	8,884	8,100	8,126	7,624	6,759	7,858	7,745	7,588	7,183	5,970	7,314
10 Percent of Habitat Capability =				841	841	799	733	888	810	813	762	676	786	775	759	718	597	731

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Elfin Cove

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
3418	4	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3420	8	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	40	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3836	8	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
4256	2	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	62	262	738	5,744	5,741	5,595	5,726	5,477	5,736	5,730	5,576	5,479	5,477	5,722	5,725	5,172	5,368	5,321
10 Percent of Habitat Capability =				574	574	560	573	548	574	573	558	548	548	572	573	517	537	532
20 Percent of Habitat Capability =				1,149	1,148	1,119	1,145	1,095	1,147	1,146	1,115	1,096	1,095	1,144	1,145	1,034	1,074	1,064

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Gustavus

WAA	Deer Harvested by This City	Deer Harvested by All Subsist	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3523	8	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
4222	23	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	17	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4256	62	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	110	726	891	4,809	4,791	4,675	4,602	4,387	4,809	4,608	4,289	4,361	4,181	4,802	4,403	4,047	4,111	3,924
10 Percent Deer Habitat Capability =				481	479	468	460	439	481	461	429	436	418	480	440	405	411	392
20 Percent Deer Habitat Capability =				962	958	935	920	877	962	922	858	872	836	960	881	809	822	785

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Haines

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1319	4	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
2202	4	4	4	136	85	85	128	136	136	85	85	128	136	136	85	85	128	136
3417	13	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	4	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3420	26	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	26	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3523	4	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	4	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	13	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	26	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3629	17	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	21	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3938	13	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	4	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	4	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4149	13	41	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4222	98	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	21	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	38	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
Total	353	2,476	3,757	29,703	29,645	28,828	29,027	27,991	29,621	28,895	27,308	28,386	27,083	28,627	27,372	25,885	26,530	25,554
10 Percent of Habitat Capability=				2,970	2,965	2,883	2,903	2,799	2,962	2,890	2,731	2,839	2,708	2,863	2,737	2,589	2,653	2,555
20 Percent of Habitat Capability=				5,941	5,929	5,766	5,805	5,598	5,924	5,779	5,462	5,677	5,417	5,725	5,474	5,177	5,306	5,111

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

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This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hollis

WAA	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
1316	3	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	2	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1530	1	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
Total	6	239	335	3,781	3,776	3,757	3,648	3,556	3,639	3,715	3,600	3,497	3,454	3,191	3,218	2,989	2,757	2,944
	10 Percent of Habitat Capability=			378	378	376	365	356	364	372	360	350	345	319	322	299	276	294
	20 Percent of Habitat Capability=			756	755	751	730	711	728	743	720	699	691	638	644	598	551	589

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hoonah

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
3523	106	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	93	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	7	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3551	86	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
4222	40	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	119	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	73	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
4256	7	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	531	1,466	1,976	9,766	9,727	9,486	9,260	8,404	9,702	9,226	8,493	8,710	7,994	9,088	8,282	7,577	7,456	7,234
	10 Percent of Habitat Capability =			977	973	949	926	840	970	923	849	871	799	909	828	758	746	723
	20 Percent of Habitat Capability =			1,953	1,945	1,897	1,852	1,681	1,940	1,845	1,699	1,742	1,599	1,818	1,656	1,515	1,491	1,447

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hydaburg

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
901	4	13	18	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,216	2,237	1,574	1,537	1,262	1,392	1,461
1107	4	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1317	2	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	4	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1323	4	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	4	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1421	4	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	4	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
Total	30	907	1,255	24,024	24,217	23,102	23,157	23,809	23,018	22,595	21,366	21,105	22,476	19,090	18,203	15,554	14,843	16,518
10 Percent of Habitat Capability=				2,402	2,422	2,310	2,316	2,381	2,302	2,260	2,137	2,111	2,248	1,909	1,820	1,555	1,484	1,652

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hyder

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1421	2	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
Total	2	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
	10 Percent of Habitat Capability =			320	325	301	302	295	278	269	260	259	272	216	187	164	139	185
	20 Percent of Habitat Capability =			640	650	603	604	589	555	538	520	518	543	431	373	327	278	369

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Juneau

WAA	Deer Harvested by This City	Deer Harvested by All NonSub	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1322	5	5	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1420	5	76	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1422	5	121	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
2305	5	5	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2517	10	10	10	128	116	116	107	124	128	116	116	106	124	128	116	111	99	124
2620	20	20	20	78	78	78	66	78	78	78	78	51	78	78	78	78	51	78
2621	100	100	104	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
2722	296	321	321	796	796	796	793	796	796	796	796	792	796	793	793	789	773	794
2825	5	5	5	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0
3002	15	49	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3003	10	25	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3105	25	25	78	2,338	2,362	1,996	1,944	2,340	2,338	2,362	1,994	1,944	2,340	2,334	2,358	1,994	1,938	2,340
3308	50	70	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	5	5	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	5	5	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	5	10	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	5	5	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	25	55	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3315	5	5	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3417	55	55	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	40	40	92	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	5	5	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3420	60	65	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	20	20	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3523	10	10	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	65	70	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	160	160	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	196	196	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	75	80	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	65	65	100	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	10	10	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	110	120	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	15	15	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3731	5	20	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	20	20	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3734	35	44	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3835	211	221	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	286	326	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3837	85	110	114	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
3938	110	110	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	45	45	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	10	10	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All NonSub	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
4041	15	15	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	10	10	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	25	35	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4044	110	110	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	5	5	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	15	15	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	160	170	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4146	75	75	75	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4147	170	170	170	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4148	241	241	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4149	165	165	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4150	281	286	291	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
4222	65	70	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	60	60	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	35	35	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
4256	25	25	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
4302	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3,761	4,231	10,395	78,100	77,488	74,438	75,353	74,931	77,004	75,478	72,157	72,988	72,818	74,291	72,665	69,239	68,120	69,219
	10 Percent of Habitat Capability =			7,810	7,749	7,444	7,535	7,493	7,700	7,548	7,216	7,299	7,282	7,429	7,267	6,924	6,812	6,922

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Kake

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1906	6	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
3001	3	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3311	11	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3314	3	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3938	20	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	72	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	26	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4252	3	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	3	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
Total	147	2,031	2,345	16,342	16,069	15,031	14,695	15,122	16,323	15,885	14,495	14,334	15,074	16,169	15,501	14,109	13,880	14,775
10 Percent of Habitat Capability=				1,634	1,607	1,503	1,470	1,512	1,632	1,589	1,450	1,433	1,507	1,617	1,550	1,411	1,388	1,478
20 Percent of Habitat Capability=				3,268	3,214	3,006	2,939	3,024	3,265	3,177	2,899	2,867	3,015	3,234	3,100	2,822	2,776	2,955

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Kasaan

According to Alaska Department of Fish and Game 1989 Deer Hunter Survey Statistics, no deer were harvested by Kasaan residents. Information about Wildlife Analysis Areas ever hunted by Kasaan residents is provided elsewhere in this appendix.

Ketchikan

WAA	Deer Harvested by This City	Deer Harvested by All NonSub	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
101	101	101	101	1,964	1,964	1,960	1,964	1,964	1,959	1,964	1,953	1,964	1,964	1,959	1,964	1,944	1,957	1,957
202	10	10	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
405	15	15	15	2,032	2,027	1,955	1,941	1,977	1,963	1,951	1,935	1,858	1,933	1,927	1,913	1,915	1,834	1,912
406	20	25	39	2,659	2,659	2,659	2,659	2,659	2,569	2,616	2,592	2,471	2,571	2,485	2,502	2,527	2,408	2,511
407	46	46	46	1,126	1,121	1,126	1,080	1,126	1,126	1,111	1,126	1,067	1,126	1,117	1,046	1,042	1,001	1,043
408	46	51	58	478	478	478	478	478	478	478	478	478	478	478	478	478	476	478
509	56	56	56	1,385	1,385	1,385	1,366	1,385	1,364	1,385	1,385	1,337	1,374	1,295	1,347	1,332	1,288	1,303
510	25	25	56	1,947	1,882	1,929	1,737	1,947	1,693	1,850	1,764	1,567	1,756	1,599	1,687	1,684	1,484	1,675
612	76	76	76	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,894	1,865	1,726	1,685	1,894	1,842
613	91	91	91	1,560	1,560	1,560	1,544	1,560	1,560	1,560	1,560	1,544	1,560	1,538	1,527	1,343	1,535	1,465
614	10	10	17	568	568	500	570	495	568	568	500	570	495	528	531	398	560	405
901	5	5	18	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,216	2,237	1,574	1,537	1,262	1,392	1,461
1003	35	35	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	5	5	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	25	25	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1210	20	20	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	116	116	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	46	46	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1213	10	10	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1214	51	51	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	25	25	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	30	30	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	10	10	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	51	56	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	35	35	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	25	25	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1420	71	76	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	101	101	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	116	121	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1525	5	5	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	25	30	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1529	20	20	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	51	56	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1707	5	5	5	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
1817	10	10	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1901	15	15	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
2722	20	321	321	796	796	796	793	796	796	796	796	792	796	793	793	789	773	794
3002	20	50	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3308	20	70	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3313	10	55	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	10	10	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3629	10	120	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079

Ketchikan (continued)

WAA	Deer Harvested by This City	Deer Harvested by All NonSub	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3731	15	20	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3835	5	221	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	5	316	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
4043	10	35	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4145	10	170	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4222	5	70	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
Total	1,544	2,897	6,025	92,763	92,271	89,800	90,093	91,675	89,745	88,709	84,344	83,744	85,979	79,803	78,529	69,892	69,007	71,647
10 Percent Deer Habitat Capability =				9,276	9,227	8,980	9,009	9,168	8,975	8,871	8,434	8,374	8,598	7,980	7,853	6,989	6,901	7,165

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Klawock

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
902	7	20	20	6,296	6,296	6,296	6,270	6,296	6,296	6,296	6,278	6,270	6,296	6,243	6,243	6,170	6,148	6,296
1107	7	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1318	113	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	7	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	7	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	7	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1421	14	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	28	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1528	21	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	28	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
Total	239	1,198	1,586	32,378	32,506	31,324	31,862	31,836	31,106	30,539	28,905	29,504	30,132	27,125	25,918	23,170	22,925	24,334
	10 Percent of Habitat Capability =			3,238	3,251	3,132	3,186	3,184	3,111	3,054	2,891	2,950	3,013	2,713	2,592	2,317	2,293	2,433

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
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Kluckwan

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1421	0	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
2514	0	0	0	289	288	270	288	278	289	269	270	270	278	288	246	238	244	263
2620	0	0	20	78	78	78	66	78	78	78	78	51	78	78	78	78	51	78
2621	0	4	104	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	0	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	0	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	0	215	220	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3524	0	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3731	0	88	108	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
4041	0	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	0	7	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4054	0	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
Total	0	2,481	3,165	27,984	27,595	25,531	26,345	26,647	27,256	26,890	24,652	25,328	25,691	25,556	24,936	23,085	22,603	24,232
	10 Percent Deer Habitat Capability =			2,798	2,760	2,553	2,635	2,665	2,726	2,689	2,465	2,533	2,569	2,556	2,494	2,309	2,260	2,423

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
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Metlakatla

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
202	22	22	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1211	2	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1316	7	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1319	2	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1527	5	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
Total	38	245	436	7,293	7,336	7,126	7,094	7,050	7,042	6,901	6,380	6,690	6,503	6,011	5,673	5,115	5,193	5,426
10 Percent of Habitat Capability =				729	734	713	709	705	704	690	638	669	650	601	567	512	519	543

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

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Meyers Chuck

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
614	7	7	17	568	568	500	570	495	568	568	500	570	495	528	531	398	560	405
821	1	1	1	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209
1315	1	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1421	1	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	1	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1531	3	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1817	3	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
Total	17	500	767	15,683	15,787	14,333	14,497	15,378	14,315	13,709	13,048	12,814	14,027	11,958	11,482	10,343	9,032	10,547
	10 Percent of Habitat Capability =			1,568	1,579	1,433	1,450	1,538	1,432	1,371	1,305	1,281	1,403	1,196	1,148	1,034	903	1,055

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

North Whale Pass

WAA	Deer Harvested by This City	Deer Harvested by All Subsist	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D
1107	13	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285
1318	10	340	396	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377
1319	5	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955
1421	5	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389
1530	31	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214
Total	64	787	1,060	16,602	16,678	16,314	16,384	16,042	15,982	15,839	14,675	14,941	15,248	13,006	12,206	10,189	10,220
	10 Percent of Habitat Capability =			1,660	1,668	1,631	1,638	1,604	1,598	1,584	1,468	1,494	1,525	1,301	1,221	1,019	1,022
	20 Percent of Habitat Capability =			3,320	3,336	3,263	3,277	3,208	3,196	3,168	2,935	2,988	3,050	2,601	2,441	2,038	2,044

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Pelican

WAA	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
3002	3	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3311	8	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3417	26	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	43	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	97	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3421	23	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
Total	200	1,315	1,494	8,730	8,541	8,200	8,296	8,400	8,730	8,541	8,098	8,266	8,400	8,641	8,427	8,009	8,191	8,325
	10 Percent of Habitat Capability =			873	854	820	830	840	873	854	810	827	840	864	843	801	819	833
	20 Percent of Habitat Capability =			1,746	1,708	1,640	1,659	1,680	1,746	1,708	1,620	1,653	1,680	1,728	1,685	1,602	1,638	1,665

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Petersburg

WAA	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
1003	14	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1318	5	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	9	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	18	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1420	5	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	9	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1526	46	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1528	23	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	28	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	14	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	5	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1602	5	5	5	793	793	793	742	808	793	793	793	742	808	793	793	793	505	588
1603	5	5	5	561	552	559	529	546	561	543	544	515	544	530	507	500	468	513
1605	37	37	37	840	840	840	840	840	840	840	838	839	840	792	722	724	711	745
1706	9	9	9	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
1904	9	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	14	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
3308	28	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	46	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	5	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3313	5	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3315	133	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3523	14	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3525	28	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3731	46	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	46	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3734	28	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3938	60	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	220	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	110	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4055	14	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	18	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196

Petersburg (continued)

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
4148	18	23	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4149	28	41	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
Total	1,102	3,729	5,313	57,191	57,033	55,375	55,492	56,311	55,354	54,756	52,196	52,337	52,962	50,502	49,098	46,941	44,841	46,923
	10 Percent of Habitat Capability =			5,719	5,703	5,538	5,549	5,631	5,535	5,476	5,220	5,234	5,296	5,050	4,910	4,694	4,484	4,692
	20 Percent of Habitat Capability =			11,438	11,407	11,075	11,098	11,262	11,071	10,951	10,439	10,467	10,592	10,100	9,820	9,388	8,968	9,385

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Point Baker

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
1526	6	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1529	21	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
Total	27	217	267	4,925	4,855	4,866	5,135	4,666	4,696	4,635	4,525	4,738	4,431	4,549	4,308	4,139	4,223	4,114
	10 Percent of Habitat Capability =			493	486	487	514	467	470	464	453	474	443	455	431	414	422	411

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Port Alexander

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
3315	2	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3732	2	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	12	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	46	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
Total	62	489	558	5,179	5,088	5,109	4,922	5,192	5,128	5,088	5,076	4,888	5,072	5,013	4,987	4,985	4,581	4,994
10 Percent of Habitat Capability =				518	509	511	492	519	513	509	508	489	507	501	499	499	458	499
20 Percent of Habitat Capability =				1,036	1,018	1,022	984	1,038	1,026	1,018	1,015	978	1,014	1,003	997	997	916	999

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Port Protection

According to Alaska Department of Fish and Game 1989 Deer Hunter Survey Statistics, no deer were harvested by Port Protection residents. Information about Wildlife Analysis Areas ever hunted by Port Protection residents is provided elsewhere in this appendix.

Saxman

According to Alaska Department of Fish and Game 1989 Deer Hunter Survey Statistics, no deer were harvested by Saxman residents. Information about Wildlife Analysis Areas ever hunted by Saxman residents is provided elsewhere in this appendix.

Sitka

WAA	Deer Harvested by This City	Deer Harvested by All Subsist	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1318	5	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
2306	11	11	11	165	165	164	165	161	165	165	164	165	143	117	162	86	107	74
3001	516	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	586	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3003	426	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3104	128	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3105	53	53	78	2,338	2,362	1,996	1,944	2,340	2,338	2,362	1,994	1,944	2,340	2,334	2,358	1,994	1,938	2,340
3206	186	186	186	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015
3207	128	128	128	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3308	43	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	144	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	330	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	277	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	149	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	117	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	122	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	27	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	96	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	154	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3524	11	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	21	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	11	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3731	21	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3733	59	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	16	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3938	16	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
4150	5	5	291	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
Total	3,658	5,147	6,447	41,906	41,308	38,151	38,201	39,449	41,619	41,015	36,993	37,639	38,375	39,341	38,651	35,287	35,179	36,505
10 Percent of Habitat Capability =				4,191	4,131	3,815	3,820	3,945	4,162	4,102	3,699	3,764	3,838	3,934	3,865	3,529	3,518	3,651
20 Percent of Habitat Capability =				8,381	8,262	7,630	7,640	7,890	8,324	8,203	7,399	7,528	7,675	7,868	7,730	7,057	7,036	7,301

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Skagway

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3310	16	16	21	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174
3526	4	4	200	1136	1129	975	1000	1027	1136	1095	959	971	866	1054	982	894	821	738
3629	19	19	139	1798	1757	1618	1798	1293	1765	1680	1527	1723	1290	1736	1636	1490	1612	1079
4044	3	3	113	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315
4222	6	6	76	2217	2226	2163	2150	2008	2217	2105	1963	2032	1963	2217	2004	1820	1958	1844
4253	1	1	36	1026	969	942	868	823	1026	838	795	700	792	1026	730	716	632	697
Total	49	49	585	8666	8570	8187	8305	7640	8633	8207	7733	7915	7400	8522	7841	7409	7512	6847
10 Percent of Habitat Capability=				867	857	819	831	764	863	821	773	792	740	852	784	741	751	685

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Tenakee Springs

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
2621	4	4	104	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
3525	10	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	49	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3627	2	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3629	18	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
Total	83	307	948	5,859	5,880	5,491	5,596	4,948	5,779	5,623	5,034	5,388	4,530	5,381	5,148	4,700	4,700	4,001
	10 Percent of Habitat Capability =			586	588	549	560	495	578	562	503	539	453	538	515	470	470	400
	20 Percent of Habitat Capability =			1,172	1,176	1,098	1,119	990	1,156	1,125	1,007	1,078	906	1,076	1,030	940	940	800

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Thorne Bay

	Deer Harvested by			Deer Habitat Capability 1st Decade					Deer Habitat Capability 2nd Decade					Deer Habitat Capability 5th Decade				
WAA	This City	All Subsist	All Hunters	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P	Alt A	Alt B	Alt C	Alt D	Alt P
510	20	31	56	1,947	1,882	1,929	1,737	1,947	1,693	1,850	1,764	1,567	1,756	1,599	1,687	1,684	1,484	1,675
1214	13	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	59	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1318	33	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	111	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	7	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1420	7	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	20	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	65	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1528	7	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
3003	7	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
Total	349	1,599	2,139	23,039	23,034	21,809	21,838	22,498	21,319	20,659	19,278	19,770	20,445	17,024	16,285	14,729	13,908	14,963
10 Percent of Habitat Capability =				2,304	2,303	2,181	2,184	2,250	2,132	2,066	1,928	1,977	2,045	1,702	1,629	1,473	1,391	1,496

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Wrangell

WAA	Deer Harvested by: This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade: Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade: Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade: Alt A	Alt B	Alt C	Alt D	Alt P
1316	5	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1318	5	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	15	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	5	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1422	5	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1525	5	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	5	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1530	61	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1902	5	5	5	247	261	260	246	247	226	257	253	237	240	192	223	213	178	208
1903	15	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004
1904	113	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	5	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	31	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	15	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
3731	20	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3733	46	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	10	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3938	10	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	5	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
4041	5	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
Total	386	2,093	2,685	41,353	41,430	40,191	39,929	41,863	40,086	39,476	38,014	37,721	39,155	36,578	35,809	34,404	32,832	34,593
10 Percent of Habitat Capability =				4,135	4,143	4,019	3,993	4,186	4,009	3,948	3,801	3,772	3,916	3,658	3,581	3,440	3,283	3,459

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Yakutat

WAA	Deer Harvested by This City	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3310	9	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
4256	9	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	18	440	470	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978
10 Percent of Habitat Capability =				198	198	198	198	198	198	198	198	198	198	198	198	198	198	198
20 Percent of Habitat Capability =				395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6	395.6

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game

Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.

Analysis does not include those WAA's where hunting occurred but residents were unsuccessful.

This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Competition, Abundance and Distribution of Deer by Alternative for the First, Second and Fifth Decades for Wildlife Analysis Areas Ever Hunted by Subsistence Community Households

Angoon

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3104	0	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3308	46	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	10	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	49	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3525	0	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	0	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	10	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	0	0	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	0	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3731	0	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3835	0	6	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3837	0	4	114	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
3938	0	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	0	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	7	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	23	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	69	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	7	7	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4044	10	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	7	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	46	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	0	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4146	0	0	75	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824

Angoon (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
4147	0	0	170	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4148	0	23	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4149	0	41	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4150	0	5	291	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
Total	284	3,331	6,295	57,900	57,215	54,558	55,380	54,386	57,445	56,736	53,315	54,244	53,247	55,694	54,828	51,290	51,464	51,573
10 Percent of Habitat Capability =				5,790	5,722	5,456	5,538	5,439	5,745	5,674	5,332	5,424	5,325	5,569	5,483	5,129	5,146	5,157

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Coffman Cove

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	0	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	0	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	27	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	48	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	6	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1527	6	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	33	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1708	0	0	0	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969
1812	0	0	0	813	811	809	803	789	808	802	798	800	777	783	785	752	769	759
1815	0	0	0	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1903	0	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004
1904	0	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	0	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
2007	0	0	0	2,767	2,687	2,669	2,688	2,777	2,587	2,309	2,192	2,152	2,330	2,241	2,057	1,895	1,821	2,057
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
5138	0	0	0	1,510	1,440	1,391	1,408	1,355	1,510	1,401	1,358	1,370	1,355	1,162	1,109	1,051	1,059	1,052
Total	120	1,894	2,555	57,507	57,366	55,776	55,336	57,226	54,562	53,178	50,610	49,794	52,577	46,567	45,215	41,624	38,994	41,988
10 Percent of Habitat Capability =				5,751	5,737	5,578	5,534	5,723	5,456	5,318	5,061	4,979	5,258	4,657	4,522	4,162	3,899	4,199

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Craig

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	60	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1213	0	0	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	7	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	20	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	60	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	168	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	7	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	27	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	7	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	20	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	134	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	13	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	13	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	7	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1812	0	0	0	813	811	809	803	789	808	802	798	800	777	783	785	752	769	759
1815	0	0	0	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333
1905	0	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5131	0	1	1	1,475	1,463	1,450	1,456	1,470	1,475	1,463	1,443	1,456	1,451	1,274	1,275	1,254	1,156	1,262
Total	543	1,829	2,570	64,811	64,922	63,141	62,571	64,783	61,980	61,237	57,822	56,975	59,466	53,178	52,176	45,449	42,788	46,647
10 Percent of Habitat Capability =				6,481	6,492	6,314	6,257	6,478	6,198	6,124	5,782	5,698	5,947	5,318	5,218	4,545	4,279	4,665

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Edna Bay

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1108	0	6	6	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1323	0	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1524	0	0	0	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726
1525	11	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	5	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	14	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1603	0	5	5	561	552	559	529	546	561	543	544	515	544	530	507	500	468	513
1605	0	37	37	840	840	840	840	840	840	840	838	839	840	792	722	724	711	745
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1903	0	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004
1904	0	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	0	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
2007	0	0	0	2,767	2,687	2,669	2,688	2,777	2,587	2,309	2,192	2,152	2,330	2,241	2,057	1,895	1,821	2,057
2008	0	0	0	366	324	308	326	310	366	304	288	304	310	366	261	242	255	265
3207	0	128	128	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3525	0	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	0	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3733	0	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	8	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3939	0	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	0	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
5015	0	0	0	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313

Edna Bay (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
5138	0	0	0	1,510	1,440	1,391	1,408	1,355	1,510	1,401	1,358	1,370	1,355	1,162	1,109	1,051	1,059	1,052
Total	38	2,970	3,903	91,352	91,017	88,948	87,919	91,288	89,061	87,854	84,063	82,092	85,891	81,281	79,752	73,329	69,862	74,799
10 Percent of Habitat Capability =				9,135	9,102	8,895	8,792	9,129	8,906	8,785	8,406	8,209	8,589	8,128	7,975	7,333	6,986	7,480

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D, P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Elfin Cove

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	0	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	4	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	0	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3420	8	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	40	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3836	8	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
4222	0	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4256	2	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	62	835	1,441	13,570	13,576	13,318	13,485	13,094	13,562	13,444	13,099	13,120	13,049	13,548	13,338	12,552	12,935	12,774
10 Percent of Habitat Capability =				1,357	1,358	1,332	1,349	1,309	1,356	1,344	1,310	1,312	1,305	1,355	1,334	1,255	1,294	1,277
20 Percent of Habitat Capability =				2,714	2,715	2,664	2,697	2,619	2,712	2,689	2,620	2,624	2,610	2,710	2,668	2,510	2,587	2,555

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Gustavus

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
2305	0	0	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2306	0	11	11	165	165	164	165	161	165	165	164	165	143	117	162	86	107	74
3417	0	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	0	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3420	0	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	0	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3523	8	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	0	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	0	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	0	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3629	0	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	0	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3837	0	4	114	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
4044	0	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4145	0	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4222	23	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	17	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	0	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
4256	62	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	110	2,124	3,540	23,597	23,529	22,750	22,905	21,667	23,500	22,904	21,579	22,217	20,965	22,647	21,753	20,385	20,484	19,637
10 Percent of Habitat Capability =				2,360	2,353	2,275	2,291	2,167	2,350	2,290	2,158	2,222	2,097	2,265	2,175	2,039	2,048	1,964
20 Percent of Habitat Capability =				4,719	4,706	4,550	4,581	4,333	4,700	4,581	4,316	4,443	4,193	4,529	4,351	4,077	4,097	3,927

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Haines

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1319	4	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
2202	4	4	4	136	85	85	128	136	136	85	85	128	136	136	85	85	128	136
2304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2305	0	0	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2620	0	0	20	78	78	78	66	78	78	78	78	51	78	78	78	78	51	78
2621	0	4	104	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
2722	0	0	321	796	796	796	793	796	796	796	796	792	796	793	793	789	773	794
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	0	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3003	0	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	0	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	0	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	0	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	13	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	4	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	0	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3420	26	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	26	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3523	4	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	4	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	13	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	26	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	0	0	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	17	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	21	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3835	0	6	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3837	0	4	114	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
3938	13	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	4	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	4	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580

Haines (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
4041	0	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	0	7	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4044	0	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	0	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	0	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4147	0	0	170	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4149	13	41	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4150	0	5	291	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
4222	98	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	21	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	38	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
Total	353	6,504	10,193	76,272	75,443	72,530	73,490	71,669	75,467	74,237	69,931	71,439	69,972	72,413	70,524	66,282	66,587	66,788
10 Percent of Habitat Capability =				7,627	7,544	7,253	7,349	7,167	7,547	7,424	6,993	7,144	6,997	7,241	7,052	6,628	6,659	6,679
20 Percent of Habitat Capability =				15,254	15,089	14,506	14,698	14,334	15,093	14,847	13,986	14,288	13,994	14,483	14,105	13,256	13,317	13,358

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hollis

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	3	32	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	2	62	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1323	0	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	0	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	1	139	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
Total	6	1,537	2,179	38,090	38,257	36,868	36,662	37,990	35,888	35,432	33,310	32,553	34,779	30,079	29,129	25,550	23,209	26,394
10 Percent of Habitat Capability =				3,809	3,826	3,687	3,666	3,799	3,589	3,543	3,331	3,255	3,478	3,008	2,913	2,555	2,321	2,639
20 Percent of Habitat Capability =				7,618	7,651	7,374	7,332	7,598	7,178	7,086	6,662	6,511	6,956	6,016	5,826	5,110	4,642	5,279

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hoonah

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
2305	0	0	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2306	0	11	11	165	165	164	165	161	165	165	164	165	143	117	162	86	107	74
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	0	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	0	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	0	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	0	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3420	0	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	0	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3523	106	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	93	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	7	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	0	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	86	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3628	0	0	10	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3629	0	54	174	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3630	0	25	40	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3835	0	6	227	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3836	0	8	334	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3837	0	4	114	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
4042	0	69	79	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
4043	0	7	42	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4044	0	89	199	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4054	0	7	12	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4055	0	60	75	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4222	40	187	257	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616

Hoonah (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
4253	73	165	200	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4256	7	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	412	3,106	5,014	44,371	43,869	42,610	43,402	41,576	43,910	43,199	41,316	42,216	40,375	42,556	41,644	39,202	39,481	38,508
10 Percent of Habitat Capability =				4,437	4,387	4,261	4,340	4,158	4,391	4,320	4,132	4,222	4,038	4,256	4,164	3,920	3,948	3,851
20 Percent of Habitat Capability =				8,874	8,774	8,522	8,680	8,315	8,782	8,640	8,263	8,443	8,075	8,511	8,329	7,840	7,896	7,702

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hydaburg

WAA's Ever Hunted	Deer Harvested by This Comm	Deer Harvested by All Subsist	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
901	4	13	18	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,237	2,216	2,237	1,574	1,537	1,262	1,392	1,461
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1106	0	34	34	417	418	419	388	429	417	411	388	316	428	389	327	302	163	420
1107	4	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1108	0	6	6	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866
1209	0	0	0	4,010	3,991	4,010	3,879	4,010	3,940	3,916	3,829	3,616	3,933	3,536	3,564	2,874	2,453	3,555
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	0	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	2	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	4	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1323	4	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	4	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	4	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	4	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1524	0	0	0	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	0	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1816	0	0	0	673	713	693	677	670	625	697	677	663	654	548	619	589	558	587
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1902	0	5	5	247	261	260	246	247	226	257	253	237	240	192	223	213	178	208
1903	0	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004

Hydaburg (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1904	0	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	0	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
Total	30	1,931	2,809	80,265	80,220	78,647	77,299	80,937	77,142	76,211	72,884	70,420	75,140	67,024	66,199	58,274	54,403	60,561
10 Percent of Habitat Capability =				8,027	8,022	7,865	7,730	8,094	7,714	7,621	7,288	7,042	7,514	6,702	6,620	5,827	5,440	6,056

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Hyder

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1108	0	6	6	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866
1209	0	0	0	4,010	3,991	4,010	3,879	4,010	3,940	3,916	3,829	3,616	3,933	3,536	3,564	2,874	2,453	3,555
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	0	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1213	0	0	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	0	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	2	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
Total	2	1,105	1,767	36,747	36,915	35,696	35,777	36,412	35,257	34,562	32,913	32,959	34,227	30,101	29,010	25,343	24,024	27,315
10 Percent of Habitat Capability =				3,675	3,692	3,570	3,578	3,641	3,526	3,456	3,291	3,296	3,423	3,010	2,901	2,534	2,402	2,732
20 Percent of Habitat Capability =				7,349	7,383	7,139	7,155	7,282	7,051	6,912	6,583	6,592	6,845	6,020	5,802	5,069	4,805	5,463

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Juneau

Juneau is not a subsistence community therefore, there is no information regarding all the Wildlife Analysis Areas that Juneau residents have ever used for hunting. Information about Wildlife Analysis Areas successfully hunted by Juneau residents is presented elsewhere in this appendix.

Kake

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1904	0	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1906	6	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
2007	0	0	0	2,767	2,687	2,669	2,688	2,777	2,587	2,309	2,192	2,152	2,330	2,241	2,057	1,895	1,821	2,057
2927	0	0	0	538	538	522	538	529	501	529	495	538	479	455	457	268	441	312
3001	3	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3003	0	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3310	0	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	11	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	0	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	3	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3731	0	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	0	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	0	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	0	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3938	20	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	72	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	26	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	0	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4054	0	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	0	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4146	0	0	75	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4148	0	23	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4252	3	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	3	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
5012	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705
5013	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5014	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5016	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5131	0	1	1	1,475	1,463	1,450	1,456	1,470	1,475	1,463	1,443	1,456	1,451	1,274	1,275	1,254	1,156	1,262

Kake (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
5132	0	0	0	928	914	890	891	902	928	914	882	891	884	750	735	723	717	724
5133	0	0	0	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,336	1,371	1,359
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
5135	0	0	0	947	926	907	907	919	947	926	892	907	892	821	807	797	817	797
Total	147	4,126	5,220	79,938	79,305	76,597	76,446	77,700	78,498	78,042	74,726	74,465	75,974	75,011	73,416	69,701	67,321	72,047
10 Percent of Habitat Capability =				7,994	7,931	7,660	7,645	7,770	7,850	7,804	7,473	7,447	7,597	7,501	7,342	6,970	6,732	7,205
20 Percent of Habitat Capability =				15,988	15,861	15,319	15,289	15,540	15,700	15,608	14,945	14,893	15,195	15,002	14,683	13,940	13,464	14,409

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Kasaan

WAA's Ever Hunted	Deer Harvested by: This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade: Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade: Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade: Alt A	Alt B	Alt C	Alt D	Alt P
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	0	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1319	0	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1817	0	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
Total	0	432	805	30,077	30,129	29,978	29,574	29,951	29,463	29,189	27,609	27,449	28,205	25,779	24,900	21,231	21,201	22,735
10 Percent of Habitat Capability =				3,008	3,013	2,998	2,957	2,995	2,946	2,919	2,761	2,745	2,821	2,578	2,490	2,123	2,120	2,274

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Ketchikan

Ketchikan is not a subsistence community therefore, there is no information regarding all the Wildlife Analysis Areas that Juneau residents have ever used for hunting. Information about Wildlife Analysis Areas successfully hunted by Ketchikan residents is presented elsewhere in this appendix.

Klawock

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
902	7	20	20	6,296	6,296	6,296	6,270	6,296	6,296	6,296	6,278	6,270	6,296	6,243	6,243	6,170	6,148	6,296
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	7	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1213	0	0	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	113	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	7	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	7	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	7	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	14	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	28	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1524	0	0	0	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	0	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	21	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	28	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
3938	0	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	0	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	0	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	0	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616

Klawock (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
5012	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705
5013	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5015	0	0	0	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
Total	239	2,486	3,402	82,863	82,759	80,668	80,184	82,272	79,770	79,175	75,576	75,026	77,361	71,447	70,617	63,689	61,335	65,403
10 Percent of Habitat Capability =				8,286	8,276	8,067	8,018	8,227	7,977	7,918	7,558	7,503	7,736	7,145	7,062	6,369	6,134	6,540

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Kluckwan

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1421	0	123	224	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
2514	0	0	0	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
2620	0	0	20	289	288	270	288	278	289	269	270	270	278	288	246	238	244	263
2621	0	4	104	78	78	78	66	78	78	78	78	51	78	78	78	78	51	78
3001	0	519	553	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
3002	0	589	638	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3308	0	117	187	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3312	0	149	154	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3313	0	132	187	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3314	0	125	135	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3315	0	211	216	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3524	0	219	289	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3627	0	30	95	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3731	0	87	107	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
4041	0	28	43	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
4042	0	69	79	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4043	0	7	42	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4054	0	7	12	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4055	0	60	75	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
Total	0	2,476	3,160	26,335	25,949	23,883	24,661	24,860	25,482	25,032	22,772	23,540	23,833	23,460	22,841	20,945	20,430	22,096
10 Percent of Habitat Capability =				2,634	2,595	2,388	2,466	2,486	2,548	2,503	2,277	2,354	2,383	2,346	2,284	2,095	2,043	2,210

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Metlakatla

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
202	22	22	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1108	0	6	6	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866
1209	0	0	0	4,010	3,991	4,010	3,879	4,010	3,940	3,916	3,829	3,616	3,933	3,536	3,564	2,874	2,453	3,555
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	2	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1213	0	0	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	7	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	2	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	0	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1527	5	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1814	0	0	0	365	365	365	365	352	360	361	365	365	347	332	335	337	332	337
1815	0	0	0	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
Total	38	1,456	2,249	52,832	53,071	51,845	51,573	52,202	50,758	50,106	47,802	47,605	49,156	43,819	42,654	37,610	35,721	39,634
10 Percent of Habitat Capability =				5,283	5,307	5,185	5,157	5,220	5,076	5,011	4,780	4,761	4,916	4,382	4,265	3,761	3,572	3,963

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Meyers Chuck

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
614	7	7	17	568	568	500	570	495	568	568	500	570	495	528	531	398	560	405
821	1	1	1	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209	1,209
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1209	0	0	0	4,010	3,991	4,010	3,879	4,010	3,940	3,916	3,829	3,616	3,933	3,536	3,564	2,874	2,453	3,555
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	1	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	0	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	1	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	1	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1526	0	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1531	3	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1812	0	0	0	813	811	809	803	789	808	802	798	800	777	783	785	752	769	759
1813	0	0	0	250	250	236	221	233	250	250	232	219	233	250	250	210	206	199
1814	0	0	0	365	365	365	365	352	360	361	365	365	347	332	335	337	332	337
1816	0	0	0	673	713	693	677	670	625	697	677	663	654	548	619	589	558	587
1817	3	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1902	0	5	5	247	261	260	246	247	226	257	253	237	240	192	223	213	178	208
1903	0	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
Total	17	1,746	2,467	52,667	52,436	50,933	50,914	52,845	50,255	49,114	46,982	46,453	49,005	43,385	42,374	38,264	35,771	39,471
10 Percent of Habitat Capability =				5,267	5,244	5,093	5,091	5,285	5,026	4,911	4,698	4,645	4,901	4,339	4,237	3,826	3,577	3,947

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

North Whale Pass

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1107	13	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1318	10	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	5	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	0	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	5	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	31	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
Total	64	1,481	2,031	30,380	30,616	29,332	29,808	30,378	28,692	28,271	26,407	26,674	27,950	23,994	22,998	20,226	18,866	21,453
10 Percent of Habitat Capability =				3,038	3,062	2,933	2,981	3,038	2,869	2,827	2,641	2,667	2,795	2,399	2,300	2,023	1,887	2,145
20 Percent of Habitat Capability =				6,076	6,123	5,866	5,962	6,076	5,738	5,654	5,281	5,335	5,590	4,799	4,600	4,045	3,773	4,291

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Pelican

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
2306	0	11	11	165	165	164	165	161	165	165	164	165	143	117	162	86	107	74
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	3	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3104	0	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3311	8	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	26	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	43	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	97	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3420	0	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	23	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3525	0	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3630	0	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3731	0	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3835	0	6	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
4222	0	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	0	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4256	0	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	200	3,149	4,334	28,423	28,010	26,287	26,218	26,176	28,296	27,663	25,102	25,518	25,572	27,579	26,731	23,492	24,147	24,610
10 Percent of Habitat Capability =				2,842	2,801	2,629	2,622	2,618	2,830	2,766	2,510	2,552	2,557	2,758	2,673	2,349	2,415	2,461
20 Percent of Habitat Capability =				5,685	5,602	5,257	5,244	5,235	5,659	5,533	5,020	5,104	5,114	5,516	5,346	4,698	4,829	4,922

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Petersburg

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	14	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	5	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	9	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	18	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	5	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	9	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	46	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	23	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	28	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	14	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	5	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1601	0	0	0	1,299	1,300	1,288	1,283	1,312	1,299	1,300	1,288	1,283	1,266	1,010	1,019	932	977	966
1602	5	5	5	793	793	793	742	808	793	793	793	742	808	793	793	793	505	588
1603	5	5	5	561	552	559	529	546	561	543	544	515	544	530	507	500	468	513
1605	37	37	37	840	840	840	840	840	840	840	838	839	840	792	722	724	711	745
1706	9	9	9	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
1707	0	0	5	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
1708	0	0	0	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1904	9	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	14	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
2007	0	0	0	2,767	2,687	2,669	2,688	2,777	2,587	2,309	2,192	2,152	2,330	2,241	2,057	1,895	1,821	2,057
2008	0	0	0	366	324	308	326	310	366	304	288	304	310	366	261	242	255	265
2926	0	9	9	472	472	472	472	459	472	472	472	472	416	472	361	293	406	285
2927	0	0	0	538	538	522	538	529	501	529	495	538	479	455	457	268	441	312
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	0	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3003	0	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3104	0	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3105	0	53	78	2,338	2,362	1,996	1,944	2,340	2,338	2,362	1,994	1,944	2,340	2,334	2,358	1,994	1,938	2,340
3308	28	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244

Petersburg (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3309	46	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	5	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	5	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	133	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	0	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3523	14	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3525	28	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	0	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	0	0	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	0	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3731	46	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	46	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3734	28	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3837	0	4	114	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
3938	60	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	220	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	110	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	0	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	0	7	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4044	0	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	0	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	14	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	18	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4146	0	0	75	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4147	0	0	170	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4148	18	23	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4149	28	41	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4253	0	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
5012	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705
5013	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5014	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5016	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349

Petersburg (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5131	0	1	1	1,475	1,463	1,450	1,456	1,470	1,475	1,463	1,443	1,456	1,451	1,274	1,275	1,254	1,156	1,262
5133	0	0	0	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,336	1,371	1,359
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
5135	0	0	0	947	926	907	907	919	947	926	892	907	892	821	807	797	817	797
5136	0	0	0	1,014	1,014	1,014	1,004	1,014	1,014	1,014	1,001	1,004	1,002	797	811	771	758	772
5137	0	0	0	543	541	542	543	542	543	541	542	543	542	538	535	531	538	531
5138	0	0	0	1,510	1,440	1,391	1,408	1,355	1,510	1,401	1,358	1,370	1,355	1,162	1,109	1,051	1,059	1,052
Total	14	93	133	7,999	7,999	7,962	7,635	8,758	7,972	7,993	7,574	6,993	7,886	6,871	7,602	5,639	5,559	5,614
10 Percent of Habitat Capability =				800	800	796	764	876	797	799	757	699	789	687	760	564	556	561
20 Percent of Habitat Capability =				1,600	1,600	1,592	1,527	1,752	1,594	1,599	1,515	1,399	1,577	1,374	1,520	1,128	1,112	1,123

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Point Baker

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1323	0	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1524	0	0	0	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	6	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	21	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1602	0	5	5	793	793	793	742	808	793	793	793	742	808	793	793	793	505	588
1817	0	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1902	0	5	5	247	261	260	246	247	226	257	253	237	240	192	223	213	178	208
1904	0	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	0	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
2202	0	4	4	136	85	85	128	136	136	85	85	128	136	136	85	85	128	136
2305	0	0	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2514	0	0	0	289	288	270	288	278	289	269	270	270	278	288	246	238	244	263
2825	0	0	5	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3733	0	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	0	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3835	0	6	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3938	0	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	0	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	0	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4145	0	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4146	0	0	75	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4147	0	0	170	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4148	0	23	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4149	0	41	206	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4150	0	5	291	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
4256	0	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
5012	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705

Point Baker (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
5014	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5015	0	0	0	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313	1,313
5016	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5131	0	1	1	1,475	1,463	1,450	1,456	1,470	1,475	1,463	1,443	1,456	1,451	1,274	1,275	1,254	1,156	1,262
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
Total	27	2,437	4,833	92,382	92,163	90,058	89,377	91,671	89,122	88,684	86,360	84,447	87,460	82,758	81,502	77,911	73,591	78,803
10 Percent of Habitat Capability =				9,238	9,216	9,006	8,938	9,167	8,912	8,868	8,636	8,445	8,746	8,276	8,150	7,791	7,359	7,880

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Port Alexander

WAA's Ever Hunted	Deer Harvested by: This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	0	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3104	0	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3206	0	186	186	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015
3207	0	128	128	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	0	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	2	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3731	0	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	2	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	12	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	46	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3940	0	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
5012	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705
5013	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5014	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5016	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
Total	62	2,389	2,652	49,712	49,304	46,689	46,481	47,818	48,237	48,392	45,117	45,037	46,007	45,899	44,731	41,451	39,615	43,643
10 Percent of Habitat Capability =				4,971	4,930	4,669	4,648	4,782	4,824	4,839	4,512	4,504	4,601	4,590	4,473	4,145	3,962	4,364

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Port Protection

Wildlife Analysis Area	Deer Harvested by: This Community	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1108	0	6	6	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866	3,866
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	0	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1213	0	0	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1421	0	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	0	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1605	0	37	37	840	840	840	840	840	840	840	838	839	840	792	722	724	711	745
1706	0	9	9	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
1707	0	0	5	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
1708	0	0	0	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969
1810	0	0	0	624	674	689	689	689	555	656	689	689	689	467	483	506	538	527
1817	0	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1902	0	5	5	247	261	260	246	247	226	257	253	237	240	192	223	213	178	208
1903	0	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004
1905	0	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	0	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	0	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3207	0	128	128	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
3308	0	117	187	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3309	0	190	195	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3310	0	360	365	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3311	0	296	306	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3312	0	149	154	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3313	0	132	187	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3315	0	211	216	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930

Port Protection (continued)

Wildlife Analysis Area	Deer Harvested by: This Community	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3419	0	97	102	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3731	0	87	107	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3733	0	122	122	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3734	0	108	152	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3938	0	128	238	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3939	0	301	346	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3940	0	147	157	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
4044	0	89	199	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4145	0	18	188	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4146	0	0	75	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4147	0	0	170	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4148	0	23	264	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4149	0	41	206	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4150	0	5	291	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
5013	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5014	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5016	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5131	0	1	1	1,475	1,463	1,450	1,456	1,470	1,475	1,463	1,443	1,456	1,451	1,274	1,275	1,254	1,156	1,262
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
5136	0	0	0	1,014	1,014	1,014	1,004	1,014	1,014	1,014	1,001	1,004	1,002	797	811	771	758	772
5137	0	0	0	543	541	542	543	542	543	541	542	543	542	538	535	531	538	531
5138	0	0	0	1,510	1,440	1,391	1,408	1,355	1,510	1,401	1,358	1,370	1,355	1,162	1,109	1,051	1,059	1,052
Total	0	4,093	6,435	129,512	129,209	126,513	125,899	129,574	126,036	125,271	120,962	119,011	123,228	115,779	114,237	105,943	100,769	108,602
10 Percent of Deer Habitat Capability =				12,951	12,921	12,651	12,590	12,957	12,604	12,527	12,096	11,901	12,323	11,578	11,424	10,594	10,077	10,860

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
According to Alaska Department of Fish and Game 1989 Deer Hunter Survey Statistics, no deer were reported harvested by Port Protection residents.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Saxman

Wildlife Analysis Area	Deer Harvested by This Community	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1105	0	0	5	6,033	5,979	6,033	5,749	5,919	6,033	5,974	5,778	5,520	5,713	5,172	5,895	4,097	4,404	4,095
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1211	0	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1213	0	0	10	1,153	1,151	1,108	1,121	1,093	1,117	1,116	968	1,055	944	1,016	1,026	750	955	738
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	0	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	0	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	0	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,5[illegible]
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	0	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	0	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1525	0	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1816	0	0	0	673	713	693	677	670	625	697	677	663	654	548	619	589	558	587
1817	0	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
Total	0	1,756	2,639	61,505	61,666	59,967	59,367	61,789	58,900	58,346	55,154	54,313	56,783	50,428	49,849	42,972	41,140	44,325
10 Percent of Habitat Capability =				6,151	6,167	5,997	5,937	6,179	5,890	5,835	5,515	5,431	5,678	5,043	4,985	4,297	4,114	4,433

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted only for those WAA's from which community residents actually harvested deer.
According to Alaska Department of Fish and Game 1989 Deer Hunter Survey Statistics, no deer were reported harvested by Saxman residents.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Sitka

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1318	5	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
2306	11	11	11	165	165	164	165	161	165	165	164	165	143	117	162	86	107	74
3001	516	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	586	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3003	426	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3104	128	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3105	53	53	78	2,338	2,362	1,996	1,944	2,340	2,338	2,362	1,994	1,944	2,340	2,334	2,358	1,994	1,938	2,340
3206	186	186	186	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015
3207	128	128	128	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3308	43	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	144	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	330	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	277	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	149	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	117	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	122	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	27	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	96	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	154	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	0	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	0	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3420	0	34	99	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	0	89	109	821	835	784	835	833	821	835	784	835	833	809	835	784	833	833
3523	0	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	11	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	21	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	11	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	0	0	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	0	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	0	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3731	21	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	0	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	59	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	16	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3837	0	4	114	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3938	16	128	238	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
3939	0	301	346	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3940	0	147	157	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
4041	0	28	43	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580

Sitka (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
4042	0	69	79	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4043	0	7	42	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4044	0	89	199	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4054	0	7	12	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4055	0	60	75	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4145	0	18	188	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4146	0	0	75	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4147	0	0	170	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4148	0	23	264	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4149	0	41	206	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4150	5	5	291	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256	1,256
4222	0	187	257	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
4252	0	313	373	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4253	0	165	200	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
5012	0	0	0	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
5013	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705
5014	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5016	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5017	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5132	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
Total	3,658	7,407	10,498	103,727	102,875	98,516	98,700	98,902	102,392	101,486	96,048	96,824	96,997	98,674	96,413	91,108	90,079	92,941
10 Percent of Habitat Capability =				10,373	10,288	9,852	9,870	9,890	10,239	10,149	9,605	9,682	9,700	9,867	9,641	9,111	9,008	9,294
20 Percent of Habitat Capability =				20,745	20,575	19,703	19,740	19,780	20,478	20,297	19,210	19,365	19,399	19,735	19,283	18,222	18,016	18,588

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Skagway

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
2304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2620	0	0	20	78	78	78	66	78	78	78	78	51	78	78	78	78	51	78
2621	0	4	104	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
3310	16	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3523	0	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	0	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	0	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	4	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3629	19	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3835	0	6	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3938	0	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	0	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4043	0	7	42	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755	1,755
4044	3	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	0	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4222	6	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	0	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	1	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
Total	49	2,599	4,467	33,591	33,423	32,908	32,902	31,127	33,394	32,733	31,742	31,788	30,472	32,592	31,545	30,041	30,022	29,065
10 Percent of Habitat Capability =				3,359	3,342	3,291	3,290	3,113	3,339	3,273	3,174	3,179	3,047	3,259	3,155	3,004	3,002	2,907

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Tenakee Springs

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
2305	0	0	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2306	0	11	11	165	165	164	165	161	165	165	164	165	143	117	162	86	107	74
2621	4	4	104	166	166	166	149	166	166	166	166	102	166	166	166	166	102	166
2722	0	0	321	796	796	796	793	796	796	796	796	792	796	793	793	789	773	794
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3104	0	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3206	0	186	186	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015	1,017	1,017	1,015	842	1,015
3207	0	128	128	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	0	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	0	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	0	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	0	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3523	0	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	0	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	10	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	49	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	2	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	0	0	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	18	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	0	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3731	0	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	0	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	0	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798
3734	0	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3835	0	6	227	1,068	1,032	1,092	1,075	889	1,023	991	1,070	981	889	1,007	976	832	939	790
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3837	0	4	114	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233	1,233
3939	0	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	0	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	0	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4044	0	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4054	0	7	12	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266	2,266
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616

Tenakee Springs (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
4222	0	187	257	2,217	2,226	2,163	2,150	2,008	2,217	2,105	1,963	2,032	1,963	2,217	2,004	1,820	1,958	1,844
4252	0	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	0	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
4256	0	80	105	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
Total	83	5,594	8,146	65,335	64,554	61,610	61,918	61,020	64,851	63,712	59,687	60,251	59,515	62,911	61,368	57,080	56,841	57,210
10 Percent of Habitat Capability =				6,534	6,455	6,161	6,192	6,102	6,485	6,371	5,969	6,025	5,952	6,291	6,137	5,708	5,684	5,721
20 Percent of Habitat Capability =				13,067	12,911	12,322	12,384	12,204	12,970	12,742	11,937	12,050	11,903	12,582	12,274	11,416	11,368	11,442

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Thorne Bay

WAAs Ever Hunted	Deer Harvested by This Comm	Deer Harvested by All Subsist	Deer Harvested by All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
510	20	31	56	1,947	1,882	1,929	1,737	1,947	1,693	1,850	1,764	1,567	1,756	1,599	1,687	1,684	1,484	1,675
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1210	0	0	20	2,600	2,600	2,600	2,549	2,600	2,528	2,510	2,486	2,307	2,486	2,130	2,017	1,844	1,265	1,843
1214	13	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	59	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	0	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	33	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	111	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	7	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	7	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	20	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	65	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1526	0	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	7	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	0	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1816	0	0	0	673	713	693	677	670	625	697	677	663	654	548	619	589	558	587
1817	0	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1910	0	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
2926	0	9	9	472	472	472	472	459	472	472	472	472	416	472	361	293	406	285
3003	7	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
Total	349	2,274	3,055	56,014	56,057	54,379	53,975	55,537	53,362	52,845	49,856	49,159	51,647	46,169	44,655	39,929	37,471	41,289
10 Percent of Habitat Capability =				5,601	5,606	5,438	5,398	5,554	5,336	5,285	4,986	4,916	5,165	4,617	4,466	3,993	3,747	4,129

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Wrangell

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1003	0	93	128	1,966	2,020	1,929	1,886	2,839	1,939	2,019	1,796	1,473	2,173	1,699	1,707	1,542	1,155	1,519
1107	0	24	49	6,888	6,915	6,906	6,848	6,915	6,882	6,865	6,237	6,037	6,648	6,198	5,881	4,369	4,285	5,521
1209	0	0	0	4,010	3,991	4,010	3,879	4,010	3,940	3,916	3,829	3,616	3,933	3,536	3,564	2,874	2,453	3,555
1211	0	16	132	2,009	2,050	1,989	1,858	2,219	1,960	1,940	1,907	1,760	1,932	1,701	1,651	1,601	1,406	1,625
1212	0	0	46	1,362	1,362	1,362	1,362	1,362	1,331	1,326	1,339	1,360	1,311	1,205	1,203	994	1,323	1,084
1214	0	30	81	1,648	1,647	1,845	1,664	1,805	1,574	1,569	1,443	1,348	1,426	1,346	1,342	965	871	976
1315	0	67	92	2,813	2,801	2,687	2,762	2,659	2,545	2,470	2,345	2,434	2,403	1,716	1,695	1,512	1,400	1,528
1316	5	35	65	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	0	64	74	1,093	1,088	1,069	960	992	1,093	1,067	1,003	913	961	1,023	996	750	716	727
1318	5	343	399	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,796	1,094	1,123	1,233	1,377	989
1319	15	160	195	2,857	2,857	2,738	2,857	2,647	2,808	2,665	2,273	2,763	2,423	2,216	1,942	1,540	1,955	1,795
1323	5	68	93	1,863	1,880	1,833	1,760	1,820	1,823	1,863	1,784	1,738	1,779	1,568	1,568	1,573	1,493	1,511
1332	0	18	23	2,769	2,805	2,769	2,708	2,711	2,719	2,784	2,603	2,591	2,591	2,355	2,277	1,983	2,098	1,880
1420	0	39	115	967	970	968	932	829	842	758	736	828	758	520	521	476	443	480
1421	0	123	224	3,200	3,249	3,013	3,022	2,947	2,777	2,692	2,599	2,588	2,715	2,157	1,865	1,635	1,389	1,845
1422	5	254	375	4,178	4,247	3,479	3,826	4,391	3,691	3,291	3,107	3,226	3,749	3,121	2,956	2,749	2,093	2,584
1524	0	0	0	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726
1525	5	19	24	1,517	1,520	1,390	1,353	2,075	1,414	1,520	1,270	1,223	1,344	1,299	1,298	1,161	1,010	1,235
1526	5	80	110	2,772	2,772	2,750	2,738	2,731	2,760	2,726	2,665	2,621	2,657	2,746	2,604	2,537	2,451	2,528
1527	0	12	12	1,600	1,602	1,572	1,552	1,357	1,447	1,469	1,373	1,340	1,321	1,267	1,253	1,147	1,005	1,179
1528	0	51	51	378	378	378	378	378	378	378	368	378	361	370	359	316	315	327
1529	0	137	157	2,153	2,083	2,116	2,397	1,935	1,936	1,909	1,860	2,117	1,774	1,803	1,704	1,602	1,772	1,586
1530	61	140	196	1,861	1,861	1,861	1,861	1,737	1,719	1,821	1,770	1,757	1,666	1,341	1,395	1,412	1,214	1,390
1531	0	45	45	2,090	2,088	1,820	1,483	2,052	1,900	1,854	1,663	1,162	1,831	1,674	1,660	1,459	756	1,525
1602	0	5	5	793	793	793	742	808	793	793	793	742	808	793	793	793	505	588
1603	0	5	5	561	552	559	529	546	561	543	544	515	544	530	507	500	468	513
1605	0	37	37	840	840	840	840	840	840	840	838	839	840	792	722	724	711	745
1706	0	9	9	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
1707	0	0	5	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
1708	0	0	0	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969
1810	0	0	0	624	674	689	689	689	555	656	689	689	689	467	483	506	538	527
1811	0	0	0	635	647	675	633	664	596	639	675	633	656	547	559	546	543	573
1812	0	0	0	813	811	809	803	789	808	802	798	800	777	783	785	752	769	759
1813	0	0	0	250	250	236	221	233	250	250	232	219	233	250	250	210	206	199
1814	0	0	0	365	365	365	365	352	360	361	365	365	347	332	335	337	332	337
1815	0	0	0	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333
1816	0	0	0	673	713	693	677	670	625	697	677	663	654	548	619	589	558	587
1817	0	3	13	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,625	1,553	1,566	1,381	1,625	1,451
1901	0	0	15	3,299	3,044	3,090	3,006	3,325	3,174	2,947	2,764	2,541	3,178	2,639	2,605	2,316	2,184	2,398
1902	5	5	5	247	261	260	246	247	226	257	253	237	240	192	223	213	178	208
1903	15	15	15	2,675	2,644	2,633	2,497	2,666	2,644	2,484	2,365	2,264	2,416	2,247	2,181	1,956	1,913	2,004

Wrangell (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
1904	113	122	122	611	608	605	552	607	581	577	540	413	550	567	557	460	359	455
1905	5	26	26	2,862	2,862	2,812	2,707	2,882	2,567	2,379	2,255	2,101	2,331	2,259	1,970	1,829	1,743	1,872
1906	31	37	37	673	758	743	693	787	654	745	708	633	787	640	724	632	370	727
1910	15	15	15	3,586	3,552	3,561	3,554	3,589	3,571	3,541	3,521	3,484	3,572	3,509	3,503	3,465	3,430	3,478
2007	0	0	0	2,767	2,687	2,669	2,688	2,777	2,587	2,309	2,192	2,152	2,330	2,241	2,057	1,895	1,821	2,057
2008	0	0	0	366	324	308	326	310	366	304	288	304	310	366	261	242	255	265
2202	0	4	4	136	85	85	128	136	136	85	85	128	136	136	85	85	128	136
2304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2305	0	0	5	285	285	285	285	285	285	285	285	285	285	218	269	207	216	161
2722	0	0	321	796	796	796	793	796	796	796	796	792	796	793	793	789	773	794
2926	0	9	9	472	472	472	472	459	472	472	472	472	416	472	361	293	406	285
2927	0	0	0	538	538	522	538	529	501	529	495	538	479	455	457	268	441	312
3001	0	519	553	3,288	3,178	2,415	2,412	2,750	3,288	3,178	2,283	2,408	2,741	3,222	3,082	2,209	2,374	2,731
3002	0	589	638	861	832	787	764	826	861	832	756	764	826	784	763	743	739	826
3003	0	433	458	1,392	1,327	1,143	1,104	1,279	1,392	1,327	1,063	1,104	1,279	1,317	1,227	1,046	1,088	1,253
3104	0	128	133	3,020	2,982	2,448	2,487	2,568	3,020	2,982	2,281	2,470	2,490	2,921	2,866	2,117	2,460	2,394
3105	0	53	78	2,338	2,362	1,996	1,944	2,340	2,338	2,362	1,994	1,944	2,340	2,334	2,358	1,994	1,938	2,340
3308	0	117	187	2,921	2,814	2,484	2,931	2,800	2,737	2,712	2,378	2,669	2,464	2,502	2,447	2,208	2,212	2,244
3309	0	190	195	960	934	854	960	798	931	898	797	920	797	911	876	775	894	786
3310	0	360	365	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174	1,174
3311	0	296	306	1,443	1,269	1,205	1,092	1,136	1,443	1,269	1,134	1,062	1,136	1,443	1,224	1,058	1,014	1,061
3312	0	149	154	435	423	377	331	359	435	423	350	331	359	381	378	338	324	359
3313	0	132	187	1,273	1,273	955	1,249	1,213	1,273	1,273	946	1,128	1,078	970	967	921	842	930
3314	0	125	135	865	848	679	595	652	865	848	619	594	652	791	787	593	580	652
3315	0	211	216	1,068	977	998	1,084	1,081	1,017	977	965	1,050	961	902	876	874	743	883
3416	0	96	96	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821	1,821
3417	0	193	248	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028	3,028	3,028	3,006	3,028	3,028
3418	0	51	91	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817	1,817	1,817	1,685	1,817	1,817
3419	0	97	102	760	760	733	760	760	760	760	733	760	760	760	760	733	760	760
3523	0	146	156	1,334	1,307	1,254	1,206	1,194	1,334	1,285	1,159	1,181	1,041	1,327	1,234	1,115	1,032	962
3524	0	219	289	260	260	260	260	214	260	260	241	260	214	217	212	185	209	177
3525	0	129	289	1,933	2,030	2,012	1,816	1,666	1,933	1,910	1,687	1,816	1,493	1,705	1,659	1,496	1,489	1,356
3526	0	90	286	1,136	1,129	975	1,000	1,027	1,136	1,095	959	971	866	1,054	982	894	821	738
3551	0	227	307	1,738	1,677	1,597	1,714	1,314	1,674	1,610	1,481	1,573	1,314	1,338	1,278	1,133	1,015	1,080
3627	0	30	95	826	798	720	833	796	779	772	695	776	715	720	705	654	676	662
3628	0	0	10	1,093	1,093	1,093	1,093	1,093	1,093	1,093	1,092	1,093	1,093	1,093	1,093	1,092	1,092	1,092
3629	0	54	174	1,798	1,757	1,618	1,798	1,293	1,765	1,680	1,527	1,723	1,290	1,736	1,636	1,490	1,612	1,079
3630	0	25	40	527	532	493	463	565	527	519	422	429	455	526	488	402	340	419
3731	20	87	107	1,026	983	901	933	1,059	1,003	982	878	909	1,016	950	936	815	690	988
3732	0	48	68	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	46	122	122	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798	1,798

Wrangell (continued)

WAA's Ever Hunted	Deer Harvested by This Comm	All Subsist	All Hunters	Deer Habitat Capability 1st Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 2nd Decade Alt A	Alt B	Alt C	Alt D	Alt P	Deer Habitat Capability 5th Decade Alt A	Alt B	Alt C	Alt D	Alt P
3734	10	108	152	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026	2,026	2,026	2,026	1,753	2,026
3836	0	8	334	1,792	1,775	1,812	1,760	1,513	1,784	1,764	1,793	1,513	1,513	1,782	1,759	1,389	1,404	1,357
3938	10	128	238	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159	3,159
3939	5	301	346	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854	2,854
3940	0	147	157	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580	2,580
4041	5	28	43	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165	2,165
4042	0	69	79	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626	2,626
4044	0	89	199	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315	1,315
4055	0	60	75	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616
4145	0	18	188	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196	1,196
4146	0	0	75	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4147	0	0	170	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4148	0	23	264	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678	1,678
4150	0	5	291	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
4252	0	313	373	454	454	454	442	381	454	414	363	344	373	454	361	308	317	314
4253	0	165	200	1,026	969	942	868	823	1,026	838	795	700	792	1,026	730	716	632	697
5012	0	0	0	4,977	4,759	4,317	4,266	4,353	4,385	4,278	3,866	3,907	4,044	3,906	3,738	3,272	3,323	3,705
5013	0	0	0	2,197	2,197	2,197	2,197	2,197	2,155	2,197	2,197	2,143	2,197	2,000	1,970	1,850	1,264	1,855
5014	0	0	0	2,090	2,212	2,096	2,062	2,060	1,876	2,135	2,096	2,009	1,970	1,549	1,555	1,455	1,246	1,454
5016	0	0	0	3,157	3,162	3,162	3,160	3,162	3,146	3,162	3,162	3,158	3,162	3,128	3,162	3,162	3,128	3,162
5017	0	0	0	7,818	7,877	7,862	7,657	7,812	7,818	7,877	7,862	7,621	7,811	7,817	7,317	7,215	6,813	7,808
5018	0	0	0	1,558	1,558	1,558	1,558	1,558	1,501	1,558	1,558	1,558	1,551	1,357	1,359	1,349	1,203	1,349
5130	0	0	0	2,748	2,759	2,692	2,685	2,696	2,748	2,759	2,685	2,685	2,677	2,514	2,543	2,453	2,335	2,444
5131	0	1	1	1,475	1,463	1,450	1,456	1,470	1,475	1,463	1,443	1,456	1,451	1,274	1,275	1,254	1,156	1,262
5133	0	0	0	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,664	1,336	1,371	1,359
5134	0	0	0	3,350	3,459	3,461	3,455	3,425	3,350	3,459	3,461	3,455	3,425	3,121	3,232	3,245	3,165	3,216
5135	0	0	0	947	926	907	907	919	947	926	892	907	892	821	807	797	817	797
5136	0	0	0	1,014	1,014	1,014	1,004	1,014	1,014	1,014	1,001	1,004	1,002	797	811	771	758	772
5137	0	0	0	543	541	542	543	542	543	541	542	543	542	538	535	531	538	531
5138	0	0	0	1,510	1,440	1,391	1,408	1,355	1,510	1,401	1,358	1,370	1,355	1,162	1,109	1,051	1,059	1,052
Total	386	8,489	12,604	187,694	186,739	180,566	179,936	183,342	182,904	180,908	171,842	170,999	175,149	168,895	164,787	152,100	147,449	156,523
10 Percent of Habitat Capability =				18,769	18,674	18,057	17,994	18,334	18,290	18,091	17,184	17,100	17,515	16,890	16,479	15,210	14,745	15,652

Sources: 1989 Deer Hunter Survey Statistics, Alaska Department of Fish and Game
Forest Service FORPLAN Analysis, June 1991; A-D,P_Deer
1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Notes: This analysis was conducted for all WAA's where community residents have ever hunted deer.
This analysis reflects the recommendation by Alaska Department of Fish and Game that no more than 10 percent of the estimated habitat capability be harvested.

Yakutat

There is no information regarding all the Wildlife Analysis Areas that Yakutat residents have ever used for hunting. Information about Wildlife Analysis Areas successfully hunted by Yakutat residents is presented elsewhere in this appendix.

Cumulative Percent of Existing Old-Growth Scheduled for Harvest by Alternative for the First, Second and Fifth Decades for Wildlife Analysis Areas Ever Hunted by Subsistence Community Households

Angoon

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Angoon (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	22,790	14,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	2,029,787	981,311	16,792	23,876	58,074	19,650	27,121	64,645	25,425	43,401	87,605	16,995	33,930	66,694	16,836	33,751	66,130
Cumulative % of Total WAA Scheduled			0.8	1.2	2.9	1.0	1.3	3.2	1.3	2.1	4.3	0.8	1.7	3.3	0.8	1.7	3.3
Cumulative % of Old-Growth Scheduled			1.7	2.4	5.9	2.0	2.8	6.6	2.6	4.4	8.9	1.7	3.5	6.8	1.7	3.4	6.7

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Coffman Cove

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5 — Alternative A 1	A 2	A 5	Alternative B 1	B 2	B 5	Alternative C 1	C 2	C 5	Alternative D 1	D 2	D 5	Alternative P 1	P 2	P 5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1708	240,796	36,056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1812	98,904	29,764	340	610	1,650	249	605	1,235	140	413	2,273	44	105	1,393	833	1,098	2,096
1815	43,795	19,227	2	5	13	1	5	11	0	0	9	0	0	8	5	5	8
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1903	119,503	57,881	3,976	5,169	14,920	4,789	8,399	16,405	2,857	9,292	19,985	4,788	9,931	18,924	2,817	8,851	19,561
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725

Coffman Cove (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
2007	115,283	56,180	1,909	7,468	16,562	2,459	12,425	20,000	2,960	14,278	22,437	1,496	14,678	23,458	2,304	13,274	20,748
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
5138	60,844	28,672	1,248	1,250	10,183	437	1,287	8,584	559	1,249	8,963	236	1,066	8,637	1,756	1,756	9,586
Total Acres	2,231,580	881,002	52,702	108,844	275,616	58,638	137,356	314,368	74,376	171,336	374,568	65,640	166,962	398,600	73,469	153,593	375,344
Cumulative % of Total WAA Scheduled			2.4	4.9	12.4	2.6	6.2	14.1	3.3	7.7	16.8	2.9	7.5	17.9	3.3	6.9	16.8
Cumulative % of Old-Growth Scheduled			6.0	12.4	31.3	6.7	15.6	35.7	8.4	19.4	42.5	7.5	19.0	45.2	8.3	17.4	42.6

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database

Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.

Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Craig

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1812	98,904	29,764	340	610	1,650	249	605	1,235	140	413	2,273	44	105	1,393	833	1,098	2,096
1815	43,795	19,227	2	5	13	1	5	11	0	0	9	0	0	8	5	5	8
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329
5131	70,472	24,787	1,029	1,029	6,592	1,246	1,246	5,985	1,037	1,131	5,515	1,242	1,242	7,713	664	1,082	5,457
Total Acres	2,021,837	902,054	52,131	102,355	267,570	52,336	118,457	299,741	72,151	160,015	393,522	67,586	154,837	422,077	68,464	148,873	384,291
Cumulative % of Total WAA Scheduled			2.6	5.1	13.2	2.6	5.9	14.8	3.6	7.9	19.5	3.3	7.7	20.9	3.4	7.4	19.0
Cumulative % of Old-Growth Scheduled			5.8	11.3	29.7	5.8	13.1	33.2	8.0	17.7	43.6	7.5	17.2	46.8	7.6	16.5	42.6

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Edna Bay

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1108	85,446	31,553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1524	11,298	7,254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1603	78,659	15,901	244	244	1,144	211	457	1,641	252	621	2,126	266	643	2,048	465	508	1,505
1605	149,092	22,354	576	576	2,698	749	1,622	5,822	649	1,597	5,469	734	1,776	5,655	1,547	1,690	5,016
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1903	119,503	57,881	3,976	5,169	14,920	4,789	8,399	16,405	2,857	9,292	19,985	4,788	9,931	18,924	2,817	8,851	19,561
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
2007	115,283	56,180	1,909	7,468	16,562	2,459	12,425	20,000	2,960	14,278	22,437	1,496	14,678	23,458	2,304	13,274	20,748
2008	10,636	5,918	0	0	0	224	661	1,788	322	720	1,949	133	601	1,855	691	691	1,853
3207	100,161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5015	19,084	11,865	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329

Edna Bay (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Cummulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
			Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
5138	60,844	28,672	1,248	1,250	10,183	437	1,287	8,584	559	1,249	8,963	236	1,066	8,637	1,756	1,756	9,586
Total Acres	3,047,437	1,201,063	68,712	111,164	258,490	74,865	136,745	296,502	89,060	177,945	372,062	83,859	190,431	401,619	69,493	156,826	356,487
Cumulative % of Total WAA Scheduled			2.3	3.6	8.5	2.5	4.5	9.7	2.9	5.8	12.2	2.8	6.2	13.2	2.3	5.1	11.7
Cumulative % of Old-Growth Scheduled			5.7	9.3	21.5	6.2	11.4	24.7	7.4	14.8	31.0	7.0	15.9	33.4	5.8	13.1	29.7

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Elfin Cove

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	546,469	148,754	0	0	200	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
Cumulative % of Total WAA Scheduled			0.0	0.0	0.0	0.0	0.4	0.9	0.0	0.6	1.1	0.2	0.4	0.7	0.3	0.4	0.8
Cumulative % of Old-Growth Scheduled			0.0	0.0	0.1	0.2	1.5	3.2	0.0	2.2	4.1	0.9	1.4	2.6	1.1	1.6	3.1

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Gustavus

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
			Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2306	58,598	18,400	0	880	7,640	0	880	4,638	0	0	4,949	1,094	2,101	7,160	1,094	2,101	7,160
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	1,226,032	454,437	6,486	9,740	41,704	7,063	19,310	54,195	6,567	25,637	63,065	14,092	27,103	63,268	14,106	27,117	63,288
Cumulative % of Total WAA Scheduled			0.5	0.8	3.4	0.6	1.6	4.4	0.5	2.1	5.1	1.1	2.2	5.2	1.2	2.2	5.2
Cumulative % of Old-Growth Scheduled			1.4	2.1	9.2	1.6	4.2	11.9	1.4	5.6	13.9	3.1	6.0	13.9	3.1	6.0	13.9

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Haines

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
			Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
2202	49,374	9,965	0	0	0	0	0	0	0	0	36	0	0	799	0	0	530
2304	56,828	13,829	0	0	20	0	0	0	0	0	8	0	0	177	0	0	152
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2620	2,560	859	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	3,750	2,809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2722	29,889	16,814	0	0	478	0	0	478	0	0	439	0	0	41	0	0	91
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3003	60,222	23,469	285	285	1,294	283	283	1,622	242	1,182	1,406	0	0	237	0	0	241
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Haines (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	22,790	14,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	2,982,012	1,245,308	16,662	31,424	87,152	20,627	41,148	106,465	27,329	62,965	131,508	22,768	53,480	119,181	32,377	55,691	112,210
Cumulative % of Total WAA Scheduled			0.6	1.1	2.9	0.7	1.4	3.6	0.9	2.1	4.4	0.8	1.8	4.0	1.1	1.9	3.8
Cumulative % of Old-Growth Scheduled			1.3	2.5	7.0	1.7	3.3	8.5	2.2	5.1	10.6	1.8	4.3	9.6	2.6	4.5	9.0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Hollis

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
Total Acres	913,901	486,764	23,382	57,996	153,211	25,351	67,634	174,333	38,671	85,188	207,186	30,591	76,371	227,661	48,307	81,792	216,109
Cumulative % of Total WAA Scheduled			2.6	6.3	16.8	2.8	7.4	19.1	4.2	9.3	22.7	3.3	8.4	24.9	5.3	8.9	23.6
Cumulative % of Old-Growth Scheduled			4.8	11.9	31.5	5.2	13.9	35.8	7.9	17.5	42.6	6.3	15.7	46.8	9.9	16.8	44.4

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Hoonah

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2306	58,598	18,400	0	880	7,640	0	880	4,638	0	0	4,949	1,094	2,101	7,160	1,094	2,101	7,160
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576

Hoonah (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	2,030,915	838,245	14,556	23,378	65,144	18,513	33,998	80,281	19,664	44,277	104,315	21,065	41,359	91,405	21,336	41,974	92,273
Cumulative % of Total WAA Scheduled			0.7	1.2	3.2	0.9	1.7	4.0	1.0	2.2	5.1	1.0	2.0	4.5	1.1	2.1	4.5
Cumulative % of Old-Growth Scheduled			1.7	2.8	7.8	2.2	4.1	9.6	2.3	5.3	12.4	2.5	4.9	10.9	2.5	5.0	11.0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Hydaburg

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1106	7,026	3,295	30	30	364	57	132	1,107	36	341	1,389	106	815	2,703	7	25	113
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1108	85,446	31,553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	82,495	31,329	98	948	5,445	78	888	4,904	99	2,424	13,091	1,505	4,397	17,719	0	907	5,226
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1524	11,298	7,254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1816	36,333	15,879	1,333	2,893	5,197	502	851	3,155	537	881	3,499	638	970	4,036	1,285	1,624	3,930
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1902	9,554	5,938	576	1,250	2,246	217	368	1,364	242	397	1,577	360	547	2,279	610	771	1,865
1903	119,503	57,881	3,976	5,169	14,920	4,789	8,399	16,405	2,857	9,292	19,985	4,788	9,931	18,924	2,817	8,851	19,561
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613

Hydaburg (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
5015	19,084	11,865	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	2,303,580	1,094,651	53,092	110,756	288,944	60,780	135,486	334,720	77,418	179,662	437,885	75,972	178,889	461,799	76,753	161,062	414,575
Cumulative % of Total WAA Scheduled			2.3	4.8	12.5	2.6	5.9	14.5	3.4	7.8	19.0	3.3	7.8	20.0	3.3	7.0	18.0
Cumulative % of Old-Growth Scheduled			4.9	10.1	26.4	5.6	12.4	30.6	7.1	16.4	40.0	6.9	16.3	42.2	7.0	14.7	37.9

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Hyder

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1108	85,446	31,553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	82,495	31,329	98	948	5,445	78	888	4,904	99	2,424	13,091	1,505	4,397	17,719	0	907	5,226
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
Total Acres	1,010,663	436,649	11,236	39,780	133,286	12,492	51,779	161,230	26,014	70,436	205,444	22,859	62,924	224,478	28,703	60,940	189,604
Cumulative % of Total WAA Scheduled			1.1	3.9	13.2	1.2	5.1	16.0	2.6	7.0	20.3	2.3	6.2	22.2	2.8	6.0	18.8
Cumulative % of Old-Growth Scheduled			2.6	9.1	30.5	2.9	11.9	36.9	6.0	16.1	47.1	5.2	14.4	51.4	6.6	14.0	43.4

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Juneau

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

Wildlife Analysis Area	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2517	76,336	9,246	54	54	790	59	59	909	0	0	1,006	0	0	1,749	0	0	1,394
2620	2,560	859	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	3,750	2,809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2722	29,889	16,814	0	0	478	0	0	478	0	0	439	0	0	41	0	0	91
2825	305,641	32,168	0	0	0	0	0	0	0	0	0	16	32	88	11	22	59
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3003	60,222	23,469	285	285	1,294	283	283	1,622	242	1,182	1,406	0	0	237	0	0	241
3105	53,198	15,686	0	0	80	0	0	80	0	23	23	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

Wildlife Analysis Area	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	22,790	14,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4302	17,661	1,940	0	0	0	0	0	0	0	0	9	0	0	0	0	0	183
Total Acres	3,738,216	1,416,587	23,837	40,553	108,448	31,295	61,252	137,650	43,878	81,373	167,816	34,800	67,706	158,920	32,605	65,768	158,386
Cumulative % of Total WAA Scheduled			0.6	1.1	2.9	0.8	1.6	3.7	1.2	2.2	4.5	0.9	1.8	4.3	0.9	1.8	4.2
Cumulative % of Old-Growth Scheduled			1.7	2.9	7.7	2.2	4.3	9.7	3.1	5.7	11.8	2.5	4.8	11.2	2.3	4.6	11.2

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Kake

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
2007	115,283	56,180	1,909	7,468	16,562	2,459	12,425	20,000	2,960	14,278	22,437	1,496	14,678	23,458	2,304	13,274	20,748
2927	150,649	69,602	374	3,984	5,305	600	2,129	5,328	3,051	4,629	24,620	2,807	5,432	23,843	2,747	5,490	23,578
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3003	60,222	23,469	285	285	1,294	283	283	1,622	242	1,182	1,406	0	0	237	0	0	241
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329
5131	70,472	24,787	1,029	1,029	6,592	1,246	1,246	5,985	1,037	1,131	5,515	1,242	1,242	7,713	664	1,082	5,457
5132	39,268	12,118	859	859	5,828	1,157	1,157	5,698	899	999	4,764	1,121	1,121	5,401	591	1,006	4,794

Kake (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5 — Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
5135	55,323	12,370	286	286	3,845	573	573	3,871	842	1,034	3,749	1,050	1,050	3,673	455	1,033	3,748
Total Acres	2,580,618	1,215,284	24,016	48,904	111,107	26,411	41,734	118,809	44,390	61,772	149,740	36,456	58,767	167,291	31,673	55,911	126,500
Cumulative % of Total WAA Scheduled			0.9	1.9	4.3	1.0	1.6	4.6	1.7	2.4	5.8	1.4	2.3	6.5	1.2	2.2	4.9
Cumulative % of Old-Growth Scheduled			2.0	4.0	9.1	2.2	3.4	9.8	3.7	5.1	12.3	3.0	4.8	13.8	2.6	4.6	10.4

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Kasaan

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
Total Acres	909,445	398,438	11,231	24,109	92,745	10,709	28,021	105,517	11,280	45,797	164,807	15,131	43,051	156,133	16,911	42,523	147,627
Cumulative % of Total WAA Scheduled			1.2	2.7	10.2	1.2	3.1	11.6	1.2	5.0	18.1	1.7	4.7	17.2	1.9	4.7	16.2
Cumulative % of Old-Growth Scheduled			2.8	6.1	23.3	2.7	7.0	26.5	2.8	11.5	41.4	3.8	10.8	39.2	4.2	10.7	37.1

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Ketchikan

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
101	38,952	18,147	0	60	60	0	60	60	0	60	180	0	60	180	0	60	180
202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
405	53,095	25,177	0	1,131	1,969	0	1,241	2,125	1,181	1,604	2,123	781	2,269	2,864	758	1,574	2,084
406	127,785	56,075	271	2,968	4,926	1,490	4,115	7,203	3,895	5,564	7,314	3,161	7,107	8,784	2,572	5,689	7,347
407	44,973	19,311	27	46	294	83	206	1,277	144	215	1,577	254	453	1,538	217	217	1,558
408	17,847	7,235	18	31	198	10	25	158	13	19	149	48	85	290	21	21	150
509	67,038	45,360	679	1,474	2,807	783	922	2,184	719	1,121	2,348	1,049	1,710	2,649	719	1,392	2,683
510	154,251	76,579	4,667	10,546	13,738	7,721	8,275	13,695	8,174	12,844	15,553	9,870	14,940	17,728	5,624	12,451	15,187
612	70,653	33,083	444	444	5,154	444	444	7,256	265	265	8,029	34	34	1,013	999	999	5,623
613	45,412	23,234	36	36	417	36	36	587	156	156	4,716	5	5	165	579	579	3,259
614	13,247	7,493	0	0	796	0	0	750	0	0	2,082	0	0	137	128	128	1,938
901	36,347	20,942	815	901	8,521	836	980	9,540	338	2,224	13,139	618	2,423	10,977	763	2,035	10,612
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1707	79,162	22,876	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
2722	29,889	16,814	0	0	478	0	0	478	0	0	439	0	0	41	0	0	91
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651

Ketchikan (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
			Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
Total Acres	3,226,456	1,424,393	64,412	120,747	302,722	77,443	137,636	340,036	101,111	192,595	459,134	88,658	183,586	449,444	81,866	169,613	429,908
Cumulative % of Total WAA Scheduled			2.0	3.7	9.4	2.4	4.3	10.5	3.1	6.0	14.2	2.7	5.7	13.9	2.5	5.3	13.3
Cumulative % of Old-Growth Scheduled			4.5	8.5	21.3	5.4	9.7	23.9	7.1	13.5	32.2	6.2	12.9	31.6	5.7	11.9	30.2

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Klawock

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1524	11,298	7,254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955

Klawock (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
5015	19,084	11,865	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
Total Acres	2,082,644	1,042,484	53,795	109,075	258,594	58,325	119,252	287,280	82,846	163,337	381,299	77,043	154,759	405,703	81,022	151,657	364,780
Cumulative % of Total WAA Scheduled			2.6	5.2	12.4	2.8	5.7	13.8	4.0	7.8	18.3	3.7	7.4	19.5	3.9	7.3	17.5
Cumulative % of Old-Growth Scheduled			5.2	10.5	24.8	5.6	11.4	27.6	7.9	15.7	36.6	7.4	14.8	38.9	7.8	14.5	35.0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Kluckwan

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
2514	36,614	17,259	0	119	238	160	760	3,416	120	120	5,874	0	0	4,155	0	0	4,155
2620	2,560	859	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	3,750	2,809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	1,081,378	497,211	9,398	20,580	53,993	13,007	23,878	65,558	24,282	36,217	75,858	9,513	25,800	67,649	13,531	27,065	62,755
Cumulative % of Total WAA Scheduled			0.9	1.9	5.0	1.2	2.2	6.1	2.2	3.3	7.0	0.9	2.4	6.3	1.3	2.5	5.8
Cumulative % of Old-Growth Scheduled			1.9	4.1	10.9	2.6	4.8	13.2	4.9	7.3	15.3	1.9	5.2	13.6	2.7	5.4	12.6

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Metlakatla

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth In WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1108	85,446	31,553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	82,495	31,329	98	948	5,445	78	888	4,904	99	2,424	13,091	1,505	4,397	17,719	0	907	5,226
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1814	69,427	27,938	456	979	2,528	329	1,101	2,330	54	118	1,900	59	141	2,008	902	1,033	1,899
1815	43,795	19,227	2	5	13	1	5	11	0	0	9	0	0	8	5	5	8
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
Total Acres	1,580,743	676,017	19,849	55,596	180,597	21,558	69,039	209,842	33,971	95,311	280,688	32,683	87,183	301,343	40,953	85,486	264,254
Cumulative % of Total WAA Scheduled			1.3	3.5	11.4	1.4	4.4	13.3	2.1	6.0	17.8	2.1	5.5	19.1	2.6	5.4	16.7
Cumulative % of Old-Growth Scheduled			2.9	8.2	26.7	3.2	10.2	31.0	5.0	14.1	41.5	4.8	12.9	44.6	6.1	12.6	39.1

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Meyers Chuck

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1209	82,495	31,329	98	948	5,445	78	888	4,904	99	2,424	13,091	1,505	4,397	17,719	0	907	5,226
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1812	98,904	29,764	340	610	1,650	249	605	1,235	140	413	2,273	44	105	1,393	833	1,098	2,096
1813	236,589	33,493	0	0	0	0	0	0	478	717	4,911	320	440	2,759	0	0	5,216
1814	69,427	27,938	456	979	2,528	329	1,101	2,330	54	118	1,900	59	141	2,008	902	1,033	1,899
1816	36,333	15,879	1,333	2,893	5,197	502	851	3,155	537	881	3,499	638	970	4,036	1,285	1,624	3,930
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1902	9,554	5,938	576	1,250	2,246	217	368	1,364	242	397	1,577	360	547	2,279	610	771	1,865
1903	119,503	57,881	3,976	5,169	14,920	4,789	8,399	16,405	2,857	9,292	19,985	4,788	9,931	18,924	2,817	8,851	19,561
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218

Meyers Chuck (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
Total Acres	1,939,219	772,077	43,064	83,563	218,444	52,737	102,286	247,595	65,252	130,435	317,637	54,918	120,603	327,775	56,662	113,446	308,464
Cumulative % of Total WAA Scheduled			2.2	4.3	11.3	2.7	5.3	12.8	3.4	6.7	16.4	2.8	6.2	16.9	2.9	5.9	15.9
Cumulative % of Old-Growth Scheduled			5.6	10.8	28.3	6.8	13.2	32.1	8.5	16.9	41.1	7.1	15.6	42.5	7.3	14.7	40.0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

North Whale Pass

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
Total Acres	870,889	392,884	25,972	57,222	145,894	27,354	66,888	174,800	42,734	88,536	207,083	31,855	78,553	226,641	44,823	78,320	198,669
Cumulative % of Total WAA Scheduled			3.0	6.6	16.8	3.1	7.7	20.1	4.9	10.2	23.8	3.7	9.0	26.0	5.1	9.0	22.8
Cumulative % of Old-Growth Scheduled			6.6	14.6	37.1	7.0	17.0	44.5	10.9	22.5	52.7	8.1	20.0	57.7	11.4	19.9	50.6

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Pelican

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
2306	58,598	18,400	0	880	7,640	0	880	4,638	0	0	4,949	1,094	2,101	7,160	1,094	2,101	7,160
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	1,217,071	378,821	7,821	10,233	28,290	8,977	15,791	35,643	7,220	23,690	56,769	7,936	17,950	37,121	8,016	17,779	36,941
Cumulative % of Total WAA Scheduled			0.6	0.8	2.3	0.7	1.3	2.9	0.6	1.9	4.7	0.7	1.5	3.1	0.7	1.5	3.0
Cumulative % of Old-Growth Scheduled			2.1	2.7	7.5	2.4	4.2	9.4	1.9	6.3	15.0	2.1	4.7	9.8	2.1	4.7	9.8

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Petersburg

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1601	43,444	25,265	705	705	7,097	680	680	6,888	880	880	8,814	699	699	7,456	498	1,247	7,681
1602	139,455	33,493	0	0	0	0	0	0	0	0	0	302	302	5,780	0	0	4,845
1603	78,659	15,901	244	244	1,144	211	457	1,641	252	621	2,126	266	643	2,048	465	508	1,505
1605	149,092	22,354	576	576	2,698	749	1,622	5,822	649	1,597	5,469	734	1,776	5,655	1,547	1,690	5,016
1706	99,140	12,289	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1707	79,162	22,876	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1708	240,796	36,056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
2007	115,283	56,180	1,909	7,468	16,562	2,459	12,425	20,000	2,960	14,278	22,437	1,496	14,678	23,458	2,304	13,274	20,748
2008	10,636	5,918	0	0	0	224	661	1,788	322	720	1,949	133	601	1,855	691	691	1,853
2926	133,832	87,030	0	440	6,395	0	600	15,544	280	280	14,635	2,770	5,540	15,015	2,775	5,550	15,044
2927	150,649	69,602	374	3,984	5,305	600	2,129	5,328	3,051	4,629	24,620	2,807	5,432	23,843	2,747	5,490	23,578
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3003	60,222	23,469	285	285	1,294	283	283	1,622	242	1,182	1,406	0	0	237	0	0	241

Petersburg (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
			Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3105	53,198	15,686	0	0	80	0	0	80	0	23	23	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955

Petersburg (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
			Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329
5131	70,472	24,787	1,029	1,029	6,592	1,246	1,246	5,985	1,037	1,131	5,515	1,242	1,242	7,713	664	1,082	5,457
5133	107,769	45,602	4	4	36	0	0	7,137	0	0	8,768	0	0	7,917	564	564	8,705
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
5135	55,323	12,370	286	286	3,845	573	573	3,871	842	1,034	3,749	1,050	1,050	3,673	455	1,033	3,748
5136	59,256	28,734	731	731	9,813	1,351	1,351	9,125	2,022	2,483	9,001	2,877	2,877	10,064	1,092	2,478	8,987
5137	50,450	23,981	0	0	378	0	0	438	0	0	738	0	0	379	0	0	738
5138	60,844	28,672	1,248	1,250	10,183	437	1,287	8,584	559	1,249	8,963	236	1,066	8,637	1,756	1,756	9,586
Total Acres	6,500,045	2,732,514	89,173	172,593	441,256	100,345	200,809	517,176	138,048	270,419	643,945	130,179	270,563	681,492	125,149	244,557	602,795
Cumulative % of Total WAA Scheduled			1.4	2.7	6.8	1.5	3.1	8.0	2.1	4.2	9.9	2.0	4.2	10.5	1.9	3.8	9.3
Cumulative % of Old-Growth Scheduled			3.3	6.3	16.1	3.7	7.3	18.9	5.1	9.9	23.6	4.8	9.9	24.9	4.6	8.9	22.1

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Point Baker

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1524	11,298	7,254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1602	139,455	33,493	0	0	0	0	0	0	0	0	0	302	302	5,780	0	0	4,845
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1902	9,554	5,938	576	1,250	2,246	217	368	1,364	242	397	1,577	360	547	2,279	610	771	1,865
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
2202	49,374	9,965	0	0	0	0	0	0	0	0	36	0	0	799	0	0	530
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2514	36,614	17,259	0	119	238	160	760	3,416	120	120	5,874	0	0	4,155	0	0	4,155
2825	305,641	32,168	0	0	0	0	0	0	0	0	0	16	32	88	11	22	59
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Point Baker (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
4150	22,790	14,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5015	19,084	11,865	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329
5131	70,472	24,787	1,029	1,029	6,592	1,246	1,246	5,985	1,037	1,131	5,515	1,242	1,242	7,713	664	1,082	5,457
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
Total Acres	3,470,971	1,415,917	62,513	117,579	254,751	71,399	133,506	286,707	93,247	161,027	348,771	87,292	165,589	381,372	76,090	141,699	325,287
Cumulative % of Total WAA Scheduled			1.8	3.4	7.3	2.1	3.8	8.3	2.7	4.6	10.0	2.5	4.8	11.0	2.2	4.1	9.4
Cumulative % of Old-Growth Scheduled			4.4	8.3	18.0	5.0	9.4	20.2	6.6	11.4	24.6	6.2	11.7	26.9	5.4	10.0	23.0

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Port Alexander

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3206	44,395	13,425	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3207	100,161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
Total Acres	1,777,734	701,982	31,039	56,359	99,460	34,783	52,479	115,964	51,448	77,052	140,716	43,505	71,016	155,350	44,271	72,472	114,293
Cumulative % of Total WAA Scheduled			1.7	3.2	5.6	2.0	3.0	6.5	2.9	4.3	7.9	2.4	4.0	8.7	2.5	4.1	6.4
Cumulative % of Old-Growth Scheduled			4.4	8.0	14.2	5.0	7.5	16.5	7.3	11.0	20.0	6.2	10.1	22.1	6.3	10.3	16.3

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Port Protection

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1108	85,446	31,553	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1605	149,092	22,354	576	576	2,698	749	1,622	5,822	649	1,597	5,469	734	1,776	5,655	1,547	1,690	5,016
1706	99,140	12,289	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1707	79,162	22,876	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1708	240,796	36,056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1810	55,614	23,967	1,892	4,156	6,048	2,064	2,673	6,414	1,089	1,089	6,562	845	845	4,911	1,088	1,433	6,373
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1902	9,554	5,938	576	1,250	2,246	217	368	1,364	242	397	1,577	360	547	2,279	610	771	1,865
1903	119,503	57,881	3,976	5,169	14,920	4,789	8,399	16,405	2,857	9,292	19,985	4,788	9,931	18,924	2,817	8,851	19,561
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
3207	100,161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133

Port Protection (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
			Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	22,790	14,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329
5131	70,472	24,787	1,029	1,029	6,592	1,246	1,246	5,985	1,037	1,131	5,515	1,242	1,242	7,713	664	1,082	5,457
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
5136	59,256	28,734	731	731	9,813	1,351	1,351	9,125	2,022	2,483	9,001	2,877	2,877	10,064	1,092	2,478	8,987

Port Protection (continued)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
			Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
5137	50,450	23,981	0	0	378	0	0	438	0	0	738	0	0	379	0	0	738
5138	60,844	28,672	1,248	1,250	10,183	437	1,287	8,584	559	1,249	8,963	236	1,066	8,637	1,756	1,756	9,586
Total Acres	4,942,540	1,967,276	79,382	137,673	341,421	86,582	155,661	377,009	112,136	206,006	497,334	101,940	214,111	539,995	85,431	183,825	466,911
Cumulative % of Total WAA Scheduled			1.6	2.8	6.9	1.8	3.1	7.6	2.3	4.2	10.1	2.1	4.3	10.9	1.7	3.7	9.4
Cumulative % of Old-Growth Scheduled			4.0	7.0	17.4	4.4	7.9	19.2	5.7	10.5	25.3	5.2	10.9	27.4	4.3	9.3	23.7

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Saxman

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1213	34,427	17,703	415	937	2,820	339	837	2,463	687	2,965	8,188	515	1,597	4,456	959	3,301	8,310
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1816	36,333	15,879	1,333	2,893	5,197	502	851	3,155	537	881	3,499	638	970	4,036	1,285	1,624	3,930
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218

Saxman (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1105	104,608	62,396	413	498	10,911	362	418	1,352	745	4,131	24,104	2,061	5,020	17,472	1,368	4,067	23,106
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
Total Acres	1,766,265	804,786	50,487	95,845	250,574	50,348	104,086	271,418	68,378	143,556	372,072	63,351	136,658	381,679	64,409	133,177	361,560
Cumulative % of Total WAA Scheduled			2.9	5.4	14.2	2.9	5.9	15.4	3.9	8.1	21.1	3.6	7.7	21.6	3.6	7.5	20.5
Cumulative % of Old-Growth Scheduled			6.3	11.9	31.1	6.3	12.9	33.7	8.5	17.8	46.2	7.9	17.0	47.4	8.0	16.5	44.9

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Sitka

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3003	60,222	23,469	285	285	1,294	283	283	1,622	242	1,182	1,406	0	0	237	0	0	241
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3105	53,198	15,686	0	0	80	0	0	80	0	23	23	0	0	0	0	0	0
3206	44,395	13,425	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3207	100,161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	53,767	13,411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	43,320	15,427	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sitka (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5132	39,268	12,118	859	859	5,828	1,157	1,157	5,698	899	999	4,764	1,121	1,121	5,401	591	1,006	4,794
Total Acres	3,904,154	1,582,741	25,919	49,205	109,463	32,677	57,766	141,836	47,263	86,834	165,117	45,748	78,771	167,193	42,040	75,407	134,721
Cumulative % of Total WAA Scheduled			0.7	1.3	2.8	0.8	1.5	3.6	1.2	2.2	4.2	1.2	2.0	4.3	1.1	1.9	3.5
Cumulative % of Old-Growth Scheduled			1.6	3.1	6.9	2.1	3.6	9.0	3.0	5.5	10.4	2.9	5.0	10.6	2.7	4.8	8.5

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Skagway

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
2304	56,828	13,829	0	0	20	0	0	0	0	0	8	0	0	177	0	0	152
2620	2,560	859	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	3,750	2,809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	111,649	62,174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
Total Acres	1,239,137	624,638	8,660	11,948	31,038	9,171	20,847	49,051	7,173	25,950	66,439	13,484	24,372	52,599	13,553	24,609	52,938
Cumulative % of Total WAA Scheduled			0.7	1.0	2.5	0.7	1.7	4.0	0.6	2.1	5.4	1.1	2.0	4.2	1.1	2.0	4.3
Cumulative % of Old-Growth Scheduled			1.4	1.9	5.0	1.5	3.3	7.9	1.1	4.2	10.6	2.2	3.9	8.4	2.2	3.9	8.5

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Tenakee Springs

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2306	58,598	18,400	0	880	7,640	0	880	4,638	0	0	4,949	1,094	2,101	7,160	1,094	2,101	7,160
2722	29,889	16,814	0	0	478	0	0	478	0	0	439	0	0	41	0	0	91
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3206	44,395	13,425	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3207	100,161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3835	33,033	13,548	1,102	1,583	2,028	1,008	1,448	1,886	51	287	5,173	0	0	1,335	0	0	1,874
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3837	60,008	31,750	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Tenakee Springs (continued)

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
4054	66,454	43,919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	89,755	35,135	0	0	0	257	2,251	4,784	16	3,215	6,170	1,345	2,062	3,867	1,675	2,436	4,576
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
4256	18,837	8,837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	2,870,492	1,063,321	17,384	26,511	77,677	21,892	37,382	93,528	28,218	57,445	122,191	24,208	48,408	102,589	24,272	48,472	102,706
Cumulative % of Total WAA Scheduled			0.6	0.9	2.7	0.8	1.3	3.3	1.0	2.0	4.3	0.8	1.7	3.6	0.8	1.7	3.6
Cumulative % of Old-Growth Scheduled			1.6	2.5	7.3	2.1	3.5	8.8	2.7	5.4	11.5	2.3	4.6	9.6	2.3	4.6	9.7

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Thorne Bay

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1210	86,946	39,771	1	1,469	9,257	1	1,651	11,279	0	2,832	15,290	1,907	5,058	25,561	0	2,834	15,305
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1316	39,688	21,075	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1816	36,333	15,879	1,333	2,893	5,197	502	851	3,155	537	881	3,499	638	970	4,036	1,285	1,624	3,930
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
2926	133,832	87,030	0	440	6,395	0	600	15,544	280	280	14,635	2,770	5,540	15,015	2,775	5,550	15,044
Total Acres	1,704,931	794,508	37,329	80,249	221,663	38,561	90,799	263,556	54,918	122,583	331,428	50,479	121,462	354,600	62,899	117,860	324,285
Cumulative % of Total WAA Scheduled			2.2	4.7	13.0	2.3	5.3	15.5	3.2	7.2	19.4	3.0	7.1	20.8	3.7	6.9	19.0
Cumulative % of Old-Growth Scheduled			4.7	10.1	27.9	4.9	11.4	33.2	6.9	15.4	41.7	6.4	15.3	44.6	7.9	14.8	40.8

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Wrangell

Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
1003	44,554	22,122	10,311	10,673	13,416	9,437	9,442	13,144	10,364	12,105	14,894	10,034	15,253	18,706	998	8,663	15,205
1107	151,395	64,356	1,239	1,330	9,841	1,095	2,027	13,629	956	7,798	31,244	1,479	9,562	31,569	1,379	4,336	18,486
1209	82,495	31,329	98	948	5,445	78	888	4,904	99	2,424	13,091	1,505	4,397	17,719	0	907	5,226
1211	44,144	25,126	2,481	3,115	7,332	1,712	3,156	7,872	2,481	3,559	8,556	3,331	4,609	10,384	0	3,237	8,234
1212	37,424	10,575	0	654	2,247	0	681	2,225	0	632	5,010	0	19	462	0	1,249	4,146
1214	75,954	32,992	2,216	3,417	9,618	2,198	3,485	9,622	2,088	8,677	22,258	2,471	7,663	21,317	2,914	9,069	22,062
1315	72,754	30,647	659	4,314	17,735	644	5,286	17,867	1,421	6,227	19,915	286	4,581	21,098	2,411	5,788	19,936
1317	61,625	21,821	2,405	2,695	5,493	2,444	2,758	4,901	882	2,180	9,986	2,444	3,108	9,234	2,096	2,509	9,860
1318	62,704	23,938	1,304	3,096	15,051	0	825	15,085	106	2,517	11,589	1,215	1,946	9,577	959	2,895	15,533
1319	104,462	49,352	195	4,118	17,680	211	5,873	23,322	1,785	9,176	26,956	467	2,997	21,587	5,365	8,966	24,270
1323	38,693	13,768	371	881	4,282	0	233	4,262	30	716	3,299	467	748	3,684	268	809	4,342
1332	68,711	24,187	1,365	2,006	7,435	1,115	1,637	8,752	442	2,681	12,006	1,436	2,725	9,956	1,398	2,875	13,622
1420	44,358	17,538	257	2,509	10,756	147	3,833	10,684	199	4,246	11,976	471	2,412	12,229	2,544	3,988	11,863
1421	91,470	46,634	0	6,198	20,174	330	8,354	27,417	3,527	9,102	30,911	1,377	7,071	33,403	5,270	8,307	28,351
1422	122,729	54,353	5,246	10,822	20,602	8,561	19,700	29,919	15,275	20,026	30,621	10,382	17,591	41,453	6,226	14,006	37,835
1524	11,298	7,254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	41,729	18,684	10,047	11,171	12,555	10,049	10,049	12,596	10,927	12,254	13,559	11,018	12,473	14,820	3,400	11,448	12,753
1526	67,166	37,176	198	339	559	675	1,254	3,102	1,100	2,288	4,138	1,283	2,982	5,500	1,442	2,435	4,230
1527	42,511	21,148	0	2,236	5,741	0	1,980	6,187	521	3,443	7,622	99	3,669	9,967	3,636	4,102	6,601
1528	24,528	11,770	525	886	1,435	643	997	1,880	1,261	2,050	3,737	711	1,641	3,864	1,736	2,167	3,320
1529	69,446	37,302	6,209	9,366	14,131	6,509	9,146	16,075	7,227	11,291	20,350	3,836	8,327	19,409	10,441	13,167	20,093
1530	62,663	24,421	0	4,584	12,081	18	3,954	12,431	899	5,159	12,012	210	5,665	16,078	6,001	6,914	12,045
1531	36,067	18,692	2,825	4,986	8,677	2,742	5,446	9,251	4,793	6,873	10,904	5,186	9,224	16,392	2,407	5,196	10,646
1602	139,455	33,493	0	0	0	0	0	0	0	0	0	302	302	5,780	0	0	4,845
1603	78,659	15,901	244	244	1,144	211	457	1,641	252	621	2,126	266	643	2,048	465	508	1,505
1605	149,092	22,354	576	576	2,698	749	1,622	5,822	649	1,597	5,469	734	1,776	5,655	1,547	1,690	5,016
1706	99,140	12,289	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1707	79,162	22,876	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1810	55,614	23,967	1,892	4,156	6,048	2,064	2,673	6,414	1,089	1,089	6,562	845	845	4,911	1,088	1,433	6,373
1811	92,706	25,420	1,072	2,355	3,427	956	1,238	2,971	569	569	3,427	411	411	2,389	398	524	2,334
1812	98,904	29,764	340	610	1,650	249	605	1,235	140	413	2,273	44	105	1,393	833	1,098	2,096
1814	69,427	27,938	456	979	2,528	329	1,101	2,330	54	118	1,900	59	141	2,008	902	1,033	1,899
1815	43,795	19,227	2	5	13	1	5	11	0	0	9	0	0	8	5	5	8
1816	36,333	15,879	1,333	2,893	5,197	502	851	3,155	537	881	3,499	638	970	4,036	1,285	1,624	3,930
1817	64,120	35,007	0	0	3,757	0	0	3,564	0	0	10,025	0	0	700	560	560	8,488
1901	132,832	33,854	5,718	8,457	20,049	11,605	13,207	22,382	9,814	16,306	28,545	8,693	18,110	28,306	6,578	9,185	26,879
1902	9,554	5,938	576	1,250	2,246	217	368	1,364	242	397	1,577	360	547	2,279	610	771	1,865

Wrangell (contined)

Cummulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A			Alternative B			Alternative C			Alternative D			Alternative P		
			1	2	5	1	2	5	1	2	5	1	2	5	1	2	5
1903	119,503	57,881	3,976	5,169	14,920	4,789	8,399	16,405	2,857	9,292	19,985	4,788	9,931	18,924	2,817	8,851	19,561
1904	23,113	11,557	220	715	1,030	209	719	1,079	1,114	2,180	4,201	1,644	3,921	5,725	811	1,880	4,114
1905	117,584	51,981	2,198	8,651	17,380	2,198	15,769	26,690	4,303	18,207	30,013	5,230	20,130	30,027	2,445	16,561	28,613
1906	11,376	6,182	315	523	704	403	524	765	584	907	1,872	1,107	1,671	5,115	0	0	725
1910	102,222	43,529	670	991	2,350	1,289	1,467	2,484	1,225	2,035	3,561	1,310	2,729	4,265	788	1,100	3,218
2007	115,283	56,180	1,909	7,468	16,562	2,459	12,425	20,000	2,960	14,278	22,437	1,496	14,678	23,458	2,304	13,274	20,748
2008	10,636	5,918	0	0	0	224	661	1,788	322	720	1,949	133	601	1,855	691	691	1,853
2202	49,374	9,965	0	0	0	0	0	0	0	0	36	0	0	799	0	0	530
2304	56,828	13,829	0	0	20	0	0	0	0	0	8	0	0	177	0	0	152
2305	102,183	27,202	0	400	8,115	0	400	4,783	0	0	5,957	0	0	8,297	0	0	8,297
2722	29,889	16,814	0	0	478	0	0	478	0	0	439	0	0	41	0	0	91
2926	133,832	87,030	0	440	6,395	0	600	15,544	280	280	14,635	2,770	5,540	15,015	2,775	5,550	15,044
2927	150,649	69,602	374	3,984	5,305	600	2,129	5,328	3,051	4,629	24,620	2,807	5,432	23,843	2,747	5,490	23,578
3001	81,381	29,197	190	190	1,082	224	224	1,445	71	1,688	2,426	388	553	744	438	507	587
3002	80,463	12,661	112	112	1,091	110	110	951	10	385	524	98	98	101	36	36	36
3003	60,222	23,469	285	285	1,294	283	283	1,622	242	1,182	1,406	0	0	237	0	0	241
3104	55,471	22,923	464	464	1,545	476	476	1,709	437	2,160	3,506	2	579	1,251	1	674	1,457
3105	53,198	15,686	0	0	80	0	0	80	0	23	23	0	0	0	0	0	0
3308	109,446	51,748	4,070	7,047	12,137	5,222	6,870	12,861	7,367	8,930	13,131	2,774	7,671	12,885	2,724	7,532	12,651
3309	42,961	17,182	93	694	1,096	72	670	1,184	84	1,063	1,723	715	729	1,009	704	718	995
3310	57,809	20,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	56,224	18,833	0	0	0	830	833	1,534	629	1,730	3,153	1,661	1,661	3,140	1,654	1,654	3,133
3312	20,654	7,031	154	154	880	124	124	723	0	348	484	164	164	164	162	162	162
3313	74,143	28,588	1,307	1,307	6,651	1,307	1,307	6,705	5,922	6,064	6,604	1,675	3,910	6,465	1,675	3,910	6,465
3314	41,827	13,561	212	212	1,210	172	172	1,003	0	767	1,065	327	327	327	349	349	349
3315	43,994	20,601	1,430	2,097	3,862	2,598	2,610	4,132	3,094	3,625	5,590	1,049	2,347	3,293	1,327	2,969	4,165
3416	64,832	15,642	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	137,909	21,762	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	52,518	20,732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	85,531	17,808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3523	49,883	23,295	123	123	283	720	1,151	2,204	780	2,418	3,406	607	2,928	4,265	746	3,472	5,082
3524	15,524	6,941	237	399	1,826	238	403	1,744	272	548	2,250	305	305	944	421	421	1,303
3525	73,519	35,019	3,549	3,549	8,579	2,294	4,219	9,764	19	5,240	10,326	1,940	4,924	8,042	1,807	4,588	7,492
3526	41,029	19,595	904	904	2,549	958	1,572	3,824	2,001	2,281	3,485	986	3,723	5,926	1,001	3,921	6,191
3551	58,338	30,020	1,402	2,359	10,788	1,488	2,522	10,901	1,703	3,427	14,061	2,747	2,747	8,501	2,631	2,631	8,142
3627	27,375	16,512	1,031	1,785	3,075	1,322	1,739	3,254	1,775	2,151	3,163	605	1,674	2,812	656	1,814	3,047
3628	33,641	19,910	10	19	31	0	0	0	9	15	21	5	10	16	3	8	14
3629	98,178	38,715	132	987	1,559	153	1,406	2,485	135	1,708	2,769	1,921	1,960	5,954	1,935	1,974	5,973
3630	71,097	14,266	139	139	165	496	764	1,375	1,308	2,616	2,876	119	2,304	3,019	115	2,221	2,910

Wrangell (contined)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5 — Alternative A 1	A 2	A 5	Alternative B 1	B 2	B 5	Alternative C 1	C 2	C 5	Alternative D 1	D 2	D 5	Alternative P 1	P 2	P 5
3731	98,751	22,506	655	960	1,767	1,200	1,205	1,907	2,124	2,489	3,836	751	1,680	2,356	473	1,058	1,484
3732	72,061	7,539	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	215,555	41,575	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	126,120	31,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3836	53,689	31,974	180	259	331	274	394	512	88	491	8,812	0	0	3,483	0	0	2,944
3938	76,664	49,541	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	66,131	39,363	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	67,845	35,782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	54,823	31,432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	52,443	39,328	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	69,322	34,668	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	68,057	43,451	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	65,100	35,853	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	65,443	22,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	44,194	16,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	36,766	24,196	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	36,573	20,394	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	22,790	14,179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4252	20,606	8,972	0	0	0	40	1,210	2,540	2	1,494	2,581	1,150	1,302	2,470	1,050	1,189	2,256
4253	46,541	14,437	0	0	0	419	2,532	5,153	331	2,690	4,235	1,878	2,747	4,823	1,631	2,163	3,906
5012	143,972	91,374	5,823	17,765	28,579	10,755	20,498	33,803	16,360	26,181	39,927	16,336	23,685	37,954	16,334	23,602	31,342
5013	63,271	38,870	922	2,230	4,691	0	644	5,034	792	792	7,093	2,777	4,005	18,913	935	1,938	6,955
5014	40,133	27,231	1,948	4,709	9,906	0	1,215	9,495	1,146	1,146	10,257	1,045	1,919	12,657	1,379	2,858	10,254
5015	19,084	11,865	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	69,258	47,870	102	247	519	0	0	0	0	0	0	41	75	499	0	0	0
5017	124,105	74,963	3	8	16	0	2	5,666	7	7	6,512	1,521	1,866	10,102	8	17	62
5018	49,257	21,477	850	2,018	4,331	51	576	4,502	459	459	4,010	482	814	7,065	535	1,109	4,014
5130	92,637	42,972	1,511	1,511	7,354	1,071	1,071	6,098	977	1,068	6,143	1,233	1,233	8,539	764	1,176	6,329
5131	70,472	24,787	1,029	1,029	6,592	1,246	1,246	5,985	1,037	1,131	5,515	1,242	1,242	7,713	664	1,082	5,457
5133	107,769	45,602	4	4	36	0	0	7,137	0	0	8,768	0	0	7,917	564	564	8,705
5134	102,411	34,359	2,218	2,218	6,468	0	0	3,934	0	0	3,673	0	0	4,788	462	462	4,212
5135	55,323	12,370	286	286	3,845	573	573	3,871	842	1,034	3,749	1,050	1,050	3,673	455	1,033	3,748
5136	59,256	28,734	731	731	9,813	1,351	1,351	9,125	2,022	2,483	9,001	2,877	2,877	10,064	1,092	2,478	8,987
5137	50,450	23,981	0	0	378	0	0	438	0	0	738	0	0	379	0	0	738

Wrangell (contined)

WAA's Ever Hunted by This Comm.	Total WAA Acres	Existing Old-Growth in WAA	Alternative A 1	Alternative A 2	Alternative A 5	Alternative B 1	Alternative B 2	Alternative B 5	Alternative C 1	Alternative C 2	Alternative C 5	Alternative D 1	Alternative D 2	Alternative D 5	Alternative P 1	Alternative P 2	Alternative P 5
			Cumulative WAA Acres Scheduled for Harvest, by Alternative, by Decades 1, 2, and 5														
5138	60,844	28,672	1,248	1,250	10,183	437	1,287	8,584	559	1,249	8,963	236	1,066	8,637	1,756	1,756	9,586
1813	236,589	33,493	0	0	0	0	0	0	478	717	4,911	320	440	2,759	0	0	5,216
1708	240,796	36,056	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Acres	8,162,413	3,179,606	103,176	198,261	498,894	114,166	227,483	584,644	149,507	301,743	740,475	144,372	301,761	769,348	137,027	276,907	687,011
Cumulative % of Total WAA Scheduled			1.3	2.4	6.1	1.4	2.8	7.2	1.8	3.7	9.1	1.8	3.7	9.4	1.7	3.4	8.4
Cumulative % of Old-Growth Scheduled			3.2	6.2	15.7	3.6	7.2	18.4	4.7	9.5	23.3	4.5	9.5	24.2	4.3	8.7	21.6

Sources: 1988 Tongass Resource Use Cooperative Survey (TRUCS) database
Forest Service FORPLAN analysis, 6/91; A-D,P_PLNT_CM

Notes: The percent shown for decade 2 is the total combined harvest of decades 1 and 2.
Harvest for decade 5 is the total combined harvest for decades 1,2,3,4 and 5 (50 years).

Yakutat

There is no information regarding all the Wildlife Analysis Areas that Yakutat residents have ever used for hunting.
Information about Wildlife Analysis Areas successfully hunted by Yakutat residents is presented elsewhere in this appendix.

Appendix L

Wildlife Data

APPENDIX L

WILDLIFE

Table of Contents

INTRODUCTION

This appendix provides vegetation data, estimated habitat capability changes for each of the management indicator species (MIS), hunting data, and State and Private Land Data for each of Alaska Department of Fish and Game's Wildlife Analysis Areas (WAA's).

The vegetation data is from the Revision GIS database, and is based on the Forest's timber type maps used as the vegetation data base for the Tongass Forest Plan Revision. These maps were completed in 1978, and have been updated since then to account for land status changes and timber harvest activity. The old-growth forest section and the timber section of the Supplemental Draft Environmental Impact Statement contain additional information about the Forest's timber type maps.

The term "habitat capability" is used in describing the estimated changes in habitat conditions which may reflect population trends for the MIS. Habitat capability is an estimate of the capability of various vegetation types and/or vegetation successional stages to support numbers of animals. Habitat capability estimates may not be equal to actual population levels and may not even indicate population trends at any given point in time because populations fluctuate naturally due to a wide range of factors, such as extreme or mild winter weather, harvesting, and species interactions not accounted for in modeling the effects of Forest Service management actions. For example, bald eagle modeling uses nesting habitat as a primary indicator. Actual observed bald eagle populations have increased from about 7,200 in 1967 to 12,000 currently, while total estimated nesting habitat capability over the last 35 years has declined from about 20,000 to 18,000 eagles.

The environmental consequences for the MIS are displayed in relation to the estimated amount of habitat capability which existed on the Tongass in 1954. This is done to provide a cumulative effects analysis of timber harvesting from the beginning of the two long-term timber sale contracts. The 1954 habitat capabilities were derived by recreating old-growth forest conditions in the Revision data base for all second growth timber stands identified in the Area's "Managed Stands Layer" as having been cut from 1954 to the present.

Timber harvest data suggests that most of the stands which have been harvested had timber volumes over 30 MBF per acre. Therefore, in recreating old-growth conditions that existed in 1954, all of the logged areas were given strata class C and D old growth attributes. If regenerating logged areas had tree species identified within them, then they received the old growth attribute for that species. If no tree species was identified, then a spruce/hemlock attribute was given. Much of the regeneration in logged areas is identified as spruce; spruce regenerates easily on sites after logging. Therefore, this approach may have biased the 1954 estimate of old growth more heavily to spruce than occurred naturally.

For each alternative, changes in habitat capability are presented for the years 2000 (or Decade 1), 2010 (or Decade 2), 2040 (or Decade 5), and 2150 (or Decade 15). This time frame allows the analysis to include the completion of the two long-term timber sale contracts and the effects of complete timber rotations.

All of the hunting information is from Alaska Department of Fish and Game data provided to the Tongass Forest Plan Revision Team.

The data on State and Private Lands was compiled by the U.S. Forest Service State and Private Forestry Section.

Some abbreviations have been used in the tables and are explained here:

ADF&G: Refers to Alaska Department of Fish and Game.

WAA: Refers to ADF&G "Wildlife Analysis Areas." A term used to identify geographic units of land used by ADF&G for wildlife management purposes beginning about 1988 or 1989. There are about 190 WAA's on the Tongass National Forest. A map in the map packet displays the WAA's in Southeast Alaska.

MHU: Refers to ADF&G "Minor Harvest Units." A term used to identify geographic units of land used by ADF&G for wildlife management purposes prior to about 1988. In most areas, MHU's and WAA's are the same geographic unit. However, in some areas, the old MHU's were divided or had boundary adjustments in 1988 and 1989, and do not represent the same geographic unit as the WAA's.

GMU: Refers to ADF&G "Game Management Units." These are aggregations of WAA's. All of the WAA's in Southeast Alaska are aggregated into 5 GMU's (GMU's 1 through 5). Two of the GMU's are subdivided into sub-units (1A, 1B, 1C, 1D, and 5A).

A-1: Refers to Alternative A, decade one. An A-2 refers to Alternative A, decade two. Data for each of the Alternatives follows the same pattern (B-1, B-2, etc.)

Hunter-day: One hunter-day is equal to one person hunting for any length of time during a 24-hour period. A person hunting for one hour is the equivalent of one hunter-day, and a person hunting for 8 hours is equivalent to one hunter day.

Table L-1

1990 Roaded and Roadless Acres, Old Growth Conifer Acres, Young Growth Conifer Acres, and Acres of Timber Harvested for each WAA

1990 WAA#	Total N. F. Acres	Roaded Acres	Roadless Acres	Per- cent Roaded	O. G. Strata A Acres	O. G. Strata B Acres	O. G. Strata C Acres	O. G. Strata D Acres	Unprod. O. G. Acres	Clearcut Stage Acres	Pole Timber Acres	Young Saw Tim. Acres	Unprod. Young Acres	O. G. Harvested 1954-1990
101	38,952	1,306	37,646	3	9,848	6,652	1,627	20	17,668	20	1,128	121	181	704
303	46,765	1,225	45,540	3	4,263	2,935	140	0	34,707	0	804	0	0	663
404	180,282	180	180,101	0	26,284	45,937	3,438	60	72,456	280	40	0	3,518	0
405	53,095	5,778	47,317	11	9,880	13,977	1,280	40	23,819	820	760		60	1,539
406	127,785	14,134	113,651	11	18,930	32,447	4,698	0	45,140	4,398	2,459	100	1,919	5,138
407	44,973	3,718	41,256	8	6,737	10,834	1,360	380	17,829	660	100	0	600	220
408	17,847	1,019	16,827	6	2,778	2,598	1,799	60	5,036	40	380	0	839	420
509	67,038	5,246	61,792	8	20,261	19,740	5,139	220	23,236	941	541	120	220	1,322
510	154,251	43,337	110,914	28	26,951	44,603	4,705	320	46,915	5,988	8,554	762	2,242	13,701
511	53,258	60	53,198	0	10,568	6,458	1,520	0	21,657	0	20	140	520	60
612	70,653	721	69,932	1	15,460	15,681	1,762	180	33,204	40	481	0	140	481
613	45,412	1,141	44,271	3	11,817	10,897	500	20	17,958	60	961	0	819	701
614	13,247	0	13,247	0	4,456	2,857	180	0	4,076	360	140	140	320	0
715	101,564	140	101,424	0	20,148	19,848	1,701	220	34,786	0	80	160	2,803	180
716	335,023	640	334,383	0	44,890	25,164	5,961	1,280	82,379	80	3,300	280	17,002	420
717	145,861	0	145,861	0	19,667	8,834	1,439	1,059	50,722	0	999	420	6,676	0
718	287,089	0	287,089	0	14,977	7,339	1,440	380	38,254	120	780	0	0	0
719	200,236	0	200,236	0	27,364	14,338	2,536	339	61,225	60	540	140	0	0
820	115,657	1,081	114,576	1	13,748	12,108	2,402	140	25,572	80	320	280	5,103	0
821	110,949	1,301	109,648	1	27,868	15,435	3,663	360	49,349	0	160	100	1,461	0
822	390,568	120	390,447	0	81,687	42,188	3,539	1,140	147,243	20	460	380	12,122	0
823	189,136	0	189,136	0	58,727	17,463	519	859	78,400	0	460	80	13,926	0
824	99,854	0	99,854	0	19,343	10,212	1,261	160	26,051	0	100	12,194	6,948	0
825	248,758	0	248,758	0	14,386	9,564	1,681	160	32,470	0	200	300	9,524	0
826	62,295	6,202	56,094	10	5,861	3,461	920	540	5,861	300	100	120	3,561	0
901	36,347	2,464	33,883	7	9,958	9,066	1,860	58	13,120	965	179	38	136	522
902	106,625	19	106,606	0	33,287	19,191	3,566	319	45,103	119	277	458	538	0
1003	44,554	37,067	7,487	83	5,722	9,937	4,757	1,706	5,422	10,041	4,700	723	80	13,577
1105	104,608	3,153	101,455	3	26,673	28,298	6,049	1,376	26,724	0	679	498	1,078	360
1106	7,026	180	6,846	3	1,218	1,158	719	200	3,193	0	0	0	0	0
1107	151,395	22,401	128,994	15	28,553	19,165	8,738	7,900	57,921	2,178	959	300	2,799	2,357
1108	85,446	518	84,927	1	19,122	7,953	3,178	1,300	45,778	40	260	120	600	0
1209	82,495	820	81,675	1	15,396	9,581	4,116	2,236	42,888	139	20	220	120	0
1210	86,946	321	86,625	0	19,084	12,096	5,447	3,144	35,118	60	60	20	1,001	0
1211	44,144	9,215	34,928	21	6,733	7,595	4,527	6,271	10,844	2,304	240	160	781	240
1212	37,424	120	37,304	0	7,184	2,187	1,084	120	22,415	60	0	20	301	60
1213	34,427	280	34,427	1	5,449	4,146	3,384	4,724	11,021	40	160	0	1,521	140
1214	75,954	12,492	63,462	16	15,435	6,907	5,065	5,585	29,808	2,843	2,443	400	801	3,984
1315	72,754	42,124	30,630	58	12,894	12,312	4,621	820	17,799	4,279	11,032	640	381	14,070
1316	39,688	280	39,408	1	4,259	9,078	5,119	2,619	11,276	0	740	600	620	80

Table L-1 (continued)

1990 Roaded and Roadless Acres, Old Growth Conifer Acres, Young Growth Conifer Acres, and Acres of Timber Harvested for each WAA

1990 WAA#	Total N. F. Acres	Roaded Acres	Roadless Acres	Per-cent Roaded	O. G. Strata A Acres	O. G. Strata B Acres	O. G. Strata C Acres	O. G. Strata D Acres	Unprod. O. G. Acres	Clearcut Stage Acres	Pole Timber Acres	Young Saw Tim. Acres	Unprod. Young Acres	O. G. Harvested 1954-1990
1317	61,625	20,140	41,485	33	8,473	10,470	2,778	100	21,041	2,477	9,931	80	959	10,870
1318	62,704	9,685	53,020	15	9,830	8,547	4,321	1,240	24,178	1,460	40	0	0	1,340
1319	104,462	31,399	73,063	30	17,185	21,144	8,903	2,120	37,230	6,682	5,078	40	760	11,159
1323	38,693	862	37,830	2	5,639	6,323	1,565	241	20,430	361	140	60	60	441
1332	68,711	10,763	57,948	16	11,774	10,556	1,757	100	33,826	2,855	2,377	60	559	4,812
1420	44,358	23,361	20,997	53	5,346	7,787	3,244	1,161	10,768	4,762	7,588	60	881	11,570
1421	91,470	40,195	51,275	44	16,078	21,056	7,660	1,840	23,119	13,237	580	160	220	13,037
1422	122,729	70,532	52,198	57	20,616	22,545	7,638	3,554	28,313	26,973	3,896	240	220	27,552
1524	11,298	159	11,139	1	2,989	3,926	339	0	2,331	0	40	0	100	0
1525	41,729	35,731	5,997	86	3,264	4,843	6,530	4,047	4,755	4,246	11,944	501	140	14,951
1526	67,166	6,183	60,983	9	14,172	16,159	5,259	1,586	20,253	1,927	482	80	241	2,048
1527	42,511	19,213	23,298	45	7,142	8,888	4,616	502	12,416	5,776	501	100	120	5,736
1528	24,528	3,656	20,872	15	4,019	5,182	2,529	40	8,742	832	855	20	0	1,429
1529	69,446	40,376	29,070	58	8,758	14,604	10,741	3,199	14,551	11,801	1,890	640	140	13,174
1530	62,663	34,304	28,359	55	12,963	9,216	2,142	100	21,533	8,736	4,629	40	0	13,366
1531	36,067	32,558	3,509	90	3,827	7,588	4,480	2,797	3,730	7,566	3,999	560	20	10,485
1601	43,444	0	43,444	0	12,760	9,770	2,635	100	15,058	0	0	0	0	0
1602	139,455	725	138,730	1	15,786	15,736	1,750	221	20,331	181	121	0	1,380	141
1603	78,659	1,622	77,037	2	10,282	4,816	783	20	21,391	340	560	0	1,763	561
1604	244,633	0	244,633	0	280	0	0	0	3,322	0	0	0	300	0
1605	149,092	15,552	133,540	10	15,397	5,958	879	120	24,557	2,219	3,437	340	2,541	4,477
1706	99,140	0	99,140	0	4,702	5,905	1,662	20	5,584	0	0	100	2,803	0
1707	79,162	0	79,162	0	10,757	10,517	1,602	0	8,915	0	280	361	2,464	0
1708	240,796	0	240,796	0	17,088	14,727	4,241	0	19,824	0	200	500	6,763	0
1809	128,574	0	128,574	0	8,953	2,463	40	0	16,126	20	34	80	1,855	0
1810	55,614	0	55,614	0	12,864	9,263	1,840	0	11,143	0	80	3,121	1,960	0
1811	92,706	320	92,386	0	12,680	11,180	1,560	0	15,260	20	240	360	2,260	140
1812	98,904	340	98,564	0	17,022	11,802	940	0	27,660	60	360	200	1,900	300
1813	236,589	20,274	216,315	9	25,802	7,371	320	0	47,799	3,372	3,699	380	1,379	5,253
1814	69,427	2,021	67,406	3	17,652	9,946	340	0	19,653	400	260	180	1,261	440
1815	43,795	1,100	42,695	3	10,164	9,043	20	0	18,066	100	700	0	900	60
1816	36,333	180	36,153	0	10,956	4,863	60	0	14,844	0	60	280	3,408	0
1817	64,120	0	64,120	0	15,403	16,806	2,538	260	24,319	20	240	200	959	0
1901	132,832	18,304	114,527	14	3,625	26,743	3,305	181	50,038	2,925	1,062	0	0	2,784
1902	9,554	8,855	699	93	4,078	1,860	0	0	2,358	319	0	0	20	320
1903	119,503	38,665	80,838	32	31,800	23,381	2,680	20	46,740	5,341	400	0	0	4,601
1904	23,113	10,775	12,337	47	4,286	6,329	942	0	3,204	2,203	2,483	1,121	0	3,225
1905	117,584	69,720	47,863	59	33,720	14,485	3,576	200	46,382	14,246	420	1,039	621	12,926
1906	11,376	5,510	5,866	48	4,713	1,349	120	0	1,509	2,778	262	80	40	2,859
1910	102,222	2,577	99,645	3	26,628	14,905	1,736	260	40,235	320	659	1,259	5,979	280

Table L-1 (continued)

1990 Roaded and Roadless Acres, Old Growth Conifer Acres, Young Growth Conifer Acres, and Acres of Timber Harvested for each WAA

1990 WAA#	Total N. F. Acres	Roaded Acres	Roadless Acres	Per-cent Roaded	O. G. Strata A Acres	O. G. Strata B Acres	O. G. Strata C Acres	O. G. Strata D Acres	Unprod. O. G. Acres	Clearcut Stage Acres	Pole Timber Acres	Young Saw Tim. Acres	Unprod. Young Acres	O. G. Harvested 1954-1990
2007	115,283	66,629	48,653	58	32,204	19,393	4,443	140	34,684	12,089	3,202	360	1,681	11,289
2008	10,636	0	10,636	0	4,239	1,459	220	0	4,058	20	120	20	100	0
2202	49,374	0	49,374	0	5,443	3,582	800	140	3,624	480	400	360	480	680
2203	102,477	1,242	101,235	1	10,421	4,462	1,261	0	20,277	521	761	380	2,360	621
2304	56,828	1,193	55,635	2	6,644	6,409	776	0	15,639	159	597	278	2,035	577
2305	102,183	2,139	100,044	2	13,397	11,127	2,678	0	13,955	180	0	619	5,676	180
2306	58,598	9,038	49,560	15	7,320	9,300	1,780	0	4,819	1,740	140	120	220	1,560
2408	19,213	140	19,073	1	4,107	521	0	0	6,591	0	140	481	1,382	0
2409	17,279	0	17,279	0	4,566	2,863	400	0	1,803	0	100	761	761	0
2410	40,097	0	40,097	0	3,505	1,382	100	0	3,605	0	160	300	1,663	0
2411	229,148	0	229,148	0	5,664	2,462	60	0	6,365	0	460	80	5,523	0
2412	36,869	0	36,869	0	1,401	741	40	0	1,041	0	100	20	1,862	0
2413	223,172	0	223,172	0	2,743	1,221	80	0	2,502	0	220	60	2,342	0
2514	36,614	679	35,935	2	9,189	6,472	1,478	120	4,534	20	20	459	2,117	0
2515	101,654	2,621	99,033	3	12,222	7,528	1,942	0	10,131	200	1,938	3,419	1,299	0
2516	238,894	0	238,894	0	0	0	0	0	421	0	0	0	80	0
2517	76,336	20	76,316	0	7,708	1,458	80	0	5,594	20	100	599	2,817	0
2518	159,074	0	159,074	0	10,215	4,738	418	0	6,655	20	1,911	2,743	11,571	0
2519	131,558	0	131,558	0	11,310	2,453	20	0	7,801	0	339	200	10,050	0
2620	2,560	40	2,520	2	519	100	240	0	1,461	0	20	60	0	0
2621	3,750	0	3,750	0	1,264	1,364	181	0	622	0	0	221	0	0
2722	29,889	1,279	28,609	4	9,814	5,780	1,220	0	5,718	20	300	841	2,260	20
2823	410,930	921	410,009	0	36,812	27,298	4,605	0	47,064	0	719	1,597	19,693	0
2824	295,473	0	295,473	0	5,718	2,987	1,059	0	8,360	0	0	0	261	0
2825	305,641	0	305,641	0	18,568	12,718	882	0	19,463	0	20	261	1,460	0
2926	133,832	521	133,311	0	36,939	47,587	2,344	160	17,166	0	220	0	2,363	0
2927	150,649	733	149,915	0	25,950	32,206	11,192	254	24,289	20	40	59	1,976	0
3001	81,381	15,520	65,861	19	19,258	9,679	260	0	20,980	1,200	4,601	240	3,340	4,961
3002	80,463	9,221	71,241	11	9,341	3,160	160	0	10,682	1,100	2,981	100	3,521	3,521
3003	60,222	5,642	54,581	9	17,186	5,339	884	60	11,288	1,185	40	501	3,508	1,045
3104	55,471	16,899	38,572	30	15,403	7,120	400	0	15,320	4,346	2,403	180	2,839	5,608
3105	53,198	940	52,258	2	11,453	4,093	140	0	19,512	20	100	20	3,882	80
3206	44,395	2,433	41,962	5	9,857	3,446	122	0	10,937	20	80	81	3,574	0
3207	100,161	0	100,161	0	19,531	3,701	160	0	29,556	0	160	220	12,874	0
3308	109,446	38,871	70,575	36	24,240	24,974	2,514	20	15,424	12,603	2,660	1,218	7,403	13,885
3309	42,961	439	42,522	1	13,371	3,612	199	0	7,251	40	60	538	4,972	0
3310	57,809	6,272	51,537	11	13,183	5,912	1,439	0	11,606	360	1,478	580	11,027	1,219
3311	56,224	1,018	55,205	2	11,764	6,570	499	0	19,398	120	419	100	3,074	459
3312	20,654	1,497	19,157	7	6,032	999	0	0	8,452	0	399	60	1,637	180
3313	74,143	15,810	58,333	21	17,737	10,330	521	0	15,212	801	7,663	220	5,009	7,703

Table L-1 (continued)

1990 Roaded and Roadless Acres, Old Growth Conifer Acres, Young Growth Conifer Acres, and Acres of Timber Harvested for each WAA

1990 WAA#	Total N. F. Acres	Roaded Acres	Roadless Acres	Per-cent Roaded	O. G. Strata A Acres	O. G. Strata B Acres	O. G. Strata C Acres	O. G. Strata D Acres	Unprod. O. G. Acres	Clearcut Stage Acres	Pole Timber Acres	Young Saw Tim. Acres	Unprod. Young Acres	O. G. Harvested 1954-1990
3314	41,827	5,280	36,548	13	9,361	4,160	40	0	15,280	160	1,600	60	440	880
3315	43,994	4,963	39,031	11	11,951	7,367	1,283	0	9,852	1,941	60	100	4,103	1,661
3416	64,832	0	64,832	0	11,747	2,677	1,218	0	26,896	20	20	20	1,298	0
3417	137,909	0	137,909	0	16,613	4,668	481	0	57,238	40	0	80	4,222	0
3418	52,518	560	51,958	1	15,353	5,279	100	0	14,773	0	40	320	2,479	0
3419	85,531	621	84,911	1	11,665	4,063	2,080	0	15,247	40	20	40	9,966	0
3420	53,767	0	53,767	0	5,905	6,245	1,261	0	6,906	20	60	0	6,206	0
3421	43,320	0	43,320	0	7,843	7,024	560	0	5,520	0	40	160	4,642	0
3523	49,883	10,978	38,905	22	12,937	7,718	2,620	20	1,739	1,800	300	140	7,457	1,240
3524	15,524	620	14,904	4	4,901	1,940	100	0	1,360	0	0	0	1,501	0
3525	73,519	25,861	47,658	35	20,339	12,240	2,440	0	6,320	5,580	840	200	8,080	5,340
3526	41,029	14,455	26,573	35	10,317	7,958	1,320	0	2,579	2,360	880	280	2,980	2,719
3551	58,338	20,099	38,239	34	17,920	10,020	1,980	100	2,920	3,720	720	2,220	6,160	3,580
3627	27,375	6,075	21,300	22	6,987	7,508	2,017	0	2,937	1,619	220	180	1,316	1,699
3628	33,641	2,439	31,202	7	9,695	7,716	2,499	0	8,336	40	240	260	999	240
3629	98,178	6,373	91,806	6	25,869	10,828	1,658	360	9,492	1,858	739	0	19,699	2,137
3630	71,097	180	70,916	0	6,783	6,443	840	200	12,626	280	0	0	8,483	0
3731	98,751	3,084	95,667	3	9,971	12,355	180	0	12,875	1,622	40	100	6,085	1,021
3732	72,061	0	72,061	0	5,179	2,260	100	0	8,976	800	60	0	6,020	0
3733	215,555	0	215,555	0	27,980	11,995	1,600	0	51,020	0	260	100	16,261	0
3734	126,120	0	126,120	0	21,329	9,520	540	0	26,252	0	100	0	10,228	0
3835	33,033	0	33,033	0	8,979	3,587	982	0	15,498	20	60	201	680	0
3836	53,689	1,540	52,149	3	12,125	14,346	5,283	220	7,845	20	240	920	8,903	0
3837	60,008	2,020	57,988	3	9,423	13,665	7,582	1,080	4,761	0	80	1,660	5,465	0
3938	76,664	0	76,664	0	19,813	19,057	9,812	859	15,898	0	0	359	3,676	0
3939	66,131	0	66,131	0	16,553	15,253	6,757	800	15,473	0	180	380	1,220	0
3940	67,845	3,058	64,787	5	11,694	16,652	6,796	640	19,850	0	1,859	300	1,559	0
4041	54,823	3,499	51,324	6	12,616	13,077	5,019	720	16,335	160	1,380	360	980	0
4042	52,443	0	52,443	0	10,776	18,415	9,617	520	7,118	20	160	1,500	600	0
4043	111,649	0	11,649	0	30,236	24,918	6,840	180	20,077	0	160	1,620	6,059	0
4044	69,322	0	69,322	0	11,524	17,964	5,000	180	4,801	0	280	460	7,964	0
4054	66,454	0	66,454	0	17,668	19,653	6,358	240	11,294	0	100	520	4,381	0
4055	68,057	1,120	66,938	2	17,029	17,928	7,595	899	12,533	320	440	500	600	0
4145	65,100	0	65,100	0	18,165	13,371	3,877	440	17,800	0	60	579	3,597	0
4146	65,443	0	65,443	0	9,212	11,423	1,877	0	13,211	0	220	679	7,541	0
4147	44,194	0	44,194	0	10,847	5,278	721	0	12,095	0	120	160	2,242	0
4148	36,766	2,712	34,053	7	8,863	10,737	4,238	358	7,190	0	1,496	657	975	0
4149	36,573	0	36,573	0	9,881	8,105	2,368	40	11,377	0	0	100	318	0
4150	22,790	0	22,790	0	9,940	3,658	561	20	6,752	0	20	60	380	0
4222	89,755	2,183	87,572	2	12,714	16,355	6,066	0	11,692	801	0	40	11,253	561

Table L-1 (continued)

1990 Roaded and Roadless Acres, Old Growth Conifer Acres, Young Growth Conifer Acres, and Acres of Timber Harvested for each WAA

1990 WAA#	Total N. F. Acres	Roaded Acres	Roadless Acres	Per-cent Roaded	O. G. Strata A Acres	O. G. Strata B Acres	O. G. Strata C Acres	O. G. Strata D Acres	Unprod. O. G. Acres	Clearcut Stage Acres	Pole Timber Acres	Young Saw Tim. Acres	Unprod. Young Acres	O. G. Harvested 1954-1990
4252	20,606	140	20,466	1	3,444	3,665	1,843	20	3,485	0	0	0	2,142	0
4253	46,541	5,728	40,813	12	4,646	8,309	1,482	0	5,748	1,822	461	60	0	1,983
4256	18,837	0	18,837	0	4,739	2,639	1,459	0	7,143	0	0	0	2,117	0
4302	17,611	0	17,661	0	580	840	520	0	420	80	620	0	100	460
4304	40	0	40	0	20	0	0	0	20	0	0	0	0	0
4407	80,103	220	79,883	0	4,641	1,200	720	0	9,903	0	20	400	780	0
4408	240,418	0	240,418	0	8,454	5,759	780	0	9,655	0	80	120	4,656	0
4503	467,553	3,420	464,133	1	6,249	2,331	8,054	1,683	13,485	5,131	13,780	45,197	13,711	0
4504	1,255	0	1,255	0	359	379	259	0	0	0	20	20	0	0
4505	310,971	460	310,511	0	2,703	3,664	661	0	2,543	581	1,322	14,055	6,971	80
4506	59,438	0	59,438	0	6,286	2,357	778	0	1,258	0	260	859	379	0
4508	284,509	22,139	262,370	8	9,609	12,097	15,243	1,381	26,535	5,000	6,984	29,839	8,767	3,480
4607	104,067	0	104,067	0	0	0	0	0	40	0	0	741	2,224	0
5012	143,972	77,896	66,076	54	26,947	41,488	17,597	5,342	20,376	18,672	2,422	259	2,991	17,354
5013	63,271	11,204	52,067	18	13,039	23,640	2,151	40	16,294	578	219	697	2,112	478
5014	40,133	2,276	37,857	6	6,170	17,748	3,313	0	6,567	259	779	359	3,580	759
5015	19,084	0	19,084	0	6,002	4,886	917	60	5,045	40	199	1,197	120	0
5016	69,258	740	68,519	1	10,463	33,910	3,497	0	5,828	60	480	359	11,271	300
5017	124,105	1,622	122,483	1	36,894	33,531	4,357	181	23,613	0	582	1,463	17,782	0
5018	49,257	6,659	42,598	14	10,146	10,074	1,018	239	18,803	900	379	140	5,799	939
5130	92,637	6,426	86,211	7	25,817	14,493	2,382	280	19,099	659	320	60	26,202	400
5131	70,472	22,692	47,779	32	14,488	8,865	1,394	40	36,177	3,310	100	20	736	2,752
5132	39,268	14,842	24,426	38	8,498	3,203	318	99	17,523	3,560	1,014	160	358	3,878
5133	107,769	1,399	106,370	1	26,184	15,757	3,341	320	38,562	300	260	40	10,414	380
5134	102,411	9,043	93,367	9	23,735	9,418	1,206	0	29,573	2,545	2,254	404	24,496	3,373
5135	55,323	399	54,924	1	8,385	3,766	219	0	32,121	0	40	60	737	0
5136	59,256	19,336	39,920	33	14,803	11,249	2,402	280	20,721	3,203	339	200	1,340	3,141
5137	50,450	40	50,410	0	11,796	10,865	1,040	280	21,217	0	60	40	900	0
5138	60,844	26,009	34,835	43	14,316	12,796	1,560	0	25,514	3,479	240	0	720	2,719
Total	16,996,674	1,346,627	15,550,367	8	2,521,693	1,997,193	471,885	89,359	3,587,849	282,594	196,542	162,696	643,352	358,418

Table L-2

Alternative Land Allocations for Each WAA Among Four General LUD Groupings

	Percent of WAA in Each Alternative Allocated to Four General LUD Groupings																			
	Wilderness					Natural Setting					Moderate Development					Intensive Development				
WAA	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P
101	0	0	0	0	0	87	89	84	89	89	13	11	16	11	11	0	0	0	0	0
303	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
404	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
405	12	12	12	12	12	31	29	27	3	27	38	19	18	9	31	18	39	42	76	29
406	0	0	0	0	0	52	34	12	8	16	25	13	31	11	41	23	53	57	81	43
407	0	0	0	0	0	90	37	18	34	25	10	45	82	12	75	0	17	0	54	0
408	0	0	0	0	0	90	90	90	84	90	10	10	10	16	10	0	0	0	0	0
509	0	0	0	0	0	67	67	54	63	54	32	31	46	18	46	2	2	0	19	0
510	0	0	0	0	0	53	46	17	19	22	38	23	34	18	43	9	31	49	63	34
511	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
612	0	0	0	0	0	26	22	5	13	7	45	32	11	15	30	30	46	83	73	63
613	0	0	0	0	0	85	85	6	78	15	15	15	94	5	85	0	0	0	17	0
614	0	0	0	0	0	69	69	5	67	8	31	20	44	17	40	0	11	51	16	51
715	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
716	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
717	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
718	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
719	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
820	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
821	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
822	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
823	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
824	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825	73	73	73	73	73	27	27	27	21	27	0	0	0	0	0	0	0	0	7	0
826	0	0	0	0	0	99	100	3	30	3	1	0	56	42	97	0	0	41	27	0
901	0	0	0	0	0	54	41	10	10	34	40	59	13	14	33	6	0	77	75	33
902	4	4	4	4	4	92	92	92	75	96	4	4	0	2	0	0	0	4	18	0
1003	0	0	0	0	0	23	23	13	0	13	27	14	7	8	24	50	63	81	92	63
1105	0	0	0	0	0	69	95	25	26	34	24	3	9	7	65	7	2	67	67	1
1106	0	0	0	0	0	88	31	29	0	98	11	69	3	11	0	0	0	68	89	2
1107	0	0	0	0	0	74	64	25	30	63	19	18	14	8	11	7	18	61	61	27
1108	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	3	3	3	3	3	76	77	24	0	76	6	4	8	10	2	15	16	66	87	19
1210	0	0	0	0	0	67	53	36	1	36	24	10	39	13	39	8	37	26	86	26
1211	0	0	0	0	0	24	17	12	1	12	60	19	19	12	19	16	64	69	87	69
1212	0	0	0	0	0	78	78	8	98	32	22	8	13	2	10	1	14	79	1	58
1213	0	0	0	0	0	56	67	8	50	8	39	26	79	6	79	5	7	13	44	12
1214	0	0	0	0	0	46	47	10	12	10	23	6	10	26	13	31	46	80	62	77
1315	0	0	0	0	0	18	18	11	10	11	53	52	60	15	63	29	30	29	75	26
1316	99	99	99	99	100	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0

Table L-2 (continued)
Alternative Land Allocations for Each WAA Among Four General LUD Groupings

	Percent of WAA in Each Alternative Allocated to Four General LUD Groupings																			
	Wilderness					Natural Setting					Moderate Development					Intensive Development				
WAA	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P
1317	0	0	0	0	0	26	27	2	8	2	69	57	34	34	56	4	16	64	57	41
1318	0	0	0	0	0	20	18	6	16	6	54	33	10	8	17	27	49	84	76	77
1319	0	0	0	0	0	31	19	0	22	17	24	26	34	10	39	45	54	65	67	44
1323	0	0	0	0	0	25	23	13	8	13	21	12	6	12	18	54	65	81	81	70
1332	0	0	0	0	0	59	34	6	23	6	36	45	12	10	19	4	21	82	67	75
1420	0	0	0	0	0	17	18	3	6	3	47	27	21	14	55	36	55	75	80	42
1421	0	0	0	0	0	35	15	2	0	15	35	48	69	12	59	30	36	29	88	25
1422	0	0	0	0	0	49	26	23	0	8	36	14	9	13	31	14	60	68	87	61
1524	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	0	0	0	0	0	12	12	7	0	7	25	16	6	7	9	63	72	87	93	83
1526	0	0	0	0	0	97	82	77	74	76	2	4	2	2	10	0	14	21	24	13
1527	0	0	0	0	0	36	37	12	7	26	45	10	9	9	27	18	53	79	84	48
1528	0	0	0	0	0	76	71	47	46	52	12	13	53	5	48	11	17	0	49	0
1529	0	0	0	0	0	46	29	13	16	19	36	35	48	9	52	19	36	39	75	29
1530	0	0	0	0	0	11	12	8	0	8	39	21	27	13	47	50	67	65	87	45
1531	0	0	0	0	0	36	36	30	0	33	42	22	5	10	13	22	42	65	90	54
1601	0	0	0	0	0	33	33	4	31	4	40	38	10	8	10	26	29	86	61	86
1602	0	0	0	0	0	100	100	100	80	83	0	0	0	4	17	0	0	0	16	0
1603	0	0	0	0	0	83	75	51	78	78	17	20	38	3	10	0	5	12	20	12
1604	8	8	8	8	8	92	92	92	92	92	0	0	0	0	0	0	0	0	0	0
1605	21	21	21	21	21	64	39	41	43	41	12	41	5	5	38	4	0	33	31	0
1706	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1707	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1708	99	99	99	99	99	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0
1809	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
1810	0	0	0	0	0	60	47	1	33	5	27	43	99	7	95	13	10	0	60	0
1811	0	0	0	0	0	88	86	39	85	85	12	10	18	2	14	0	4	43	12	1
1812	0	0	0	0	0	68	83	61	88	61	32	8	4	2	11	0	9	34	10	28
1813	0	0	0	0	0	100	100	37	78	59	0	0	7	4	6	0	0	56	17	35
1814	0	0	0	0	0	66	66	65	63	65	24	5	4	4	4	10	29	32	33	32
1815	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
1816	0	0	0	0	0	8	7	4	0	6	68	31	11	11	11	24	62	85	88	83
1817	0	0	0	0	0	50	50	5	48	11	21	5	11	5	17	29	45	84	47	72
1901	0	0	0	0	0	39	35	9	10	9	57	57	65	34	91	4	8	26	56	0
1902	0	0	0	0	0	39	39	24	0	24	50	33	7	12	7	11	27	68	88	68
1903	0	0	0	0	0	28	18	4	10	4	64	64	47	30	59	8	18	49	61	38
1904	0	0	0	0	0	69	76	18	2	22	29	21	82	84	78	3	3	0	13	0
1905	0	0	0	0	0	7	7	4	0	4	67	39	53	39	53	26	55	43	61	43
1906	0	0	0	0	0	67	67	47	0	68	30	2	3	23	2	3	31	50	77	30
1910	81	81	81	81	81	5	5	2	0	2	13	7	1	1	10	0	7	15	17	7

Table L-2 (continued)
Alternative Land Allocations for Each WAA Among Four General LUD Groupings

	Percent of WAA in Each Alternative Allocated to Four General LUD Groupings																			
	Wilderness					Natural Setting					Moderate Development					Intensive Development				
WAA	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P
2007	0	0	0	0	0	32	23	6	7	15	63	49	66	36	57	5	28	28	57	28
2008	0	0	0	0	0	100	17	17	26	17	0	75	83	41	83	0	8	0	33	0
2202	0	0	0	0	0	100	42	4	100	10	0	58	96	0	90	0	0	0	0	0
2203	95	95	95	95	95	5	5	1	5	1	0	0	4	0	4	0	0	0	0	0
2304	0	0	0	0	0	89	89	88	84	88	11	11	12	3	12	0	0	0	12	0
2305	0	0	0	0	0	9	9	4	17	4	90	90	96	83	96	1	1	0	0	0
2306	0	0	0	0	0	7	7	2	6	2	92	92	97	94	97	1	1	0	0	0
2408	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2409	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2410	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2411	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2412	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2413	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2514	0	0	0	0	0	98	53	18	52	18	2	47	82	48	82	0	0	0	0	0
2515	0	0	0	0	0	99	100	100	97	100	1	0	0	3	0	0	0	0	0	0
2516	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2517	0	0	0	0	0	77	77	77	74	77	23	23	23	26	23	0	0	0	0	0
2518	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
2519	0	0	0	0	0	87	87	86	86	86	13	13	14	14	14	0	0	0	0	0
2620	0	0	0	0	0	100	100	100	70	100	0	0	0	30	0	0	0	0	0	0
2621	0	0	0	0	0	100	100	100	57	100	0	0	0	43	0	0	0	0	0	0
2722	0	0	0	0	0	87	87	82	85	82	13	13	18	2	18	0	0	0	13	0
2823	0	0	0	0	0	70	70	32	29	32	29	27	64	9	64	1	3	4	62	4
2824	98	98	98	98	98	2	2	2	0	2	0	0	0	0	0	0	0	0	2	0
2825	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2926	45	45	45	45	45	34	10	4	4	4	15	20	9	5	9	7	25	42	45	42
2927	34	34	34	34	34	52	51	5	51	5	12	8	30	1	30	1	7	32	14	32
3001	0	0	0	0	0	69	63	10	33	46	29	19	65	21	49	3	17	24	46	6
3002	0	0	0	0	0	36	35	19	33	94	64	58	71	58	6	0	7	10	9	0
3003	0	0	0	0	0	36	36	15	29	25	60	57	73	53	64	4	6	12	18	11
3104	0	0	0	0	0	75	72	12	31	26	19	11	72	10	58	7	16	16	58	16
3105	0	0	0	0	0	77	87	4	4	79	19	3	96	96	21	4	11	0	0	0
3206	0	0	0	0	0	100	100	100	35	100	0	0	0	8	0	0	0	0	57	0
3207	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	0	0	0	0	0	15	14	5	5	5	82	55	25	12	29	3	31	70	83	66
3309	0	0	0	0	0	61	62	61	61	62	38	16	4	4	5	0	21	35	35	34
3310	3	3	3	3	3	97	97	97	97	97	0	0	0	0	0	0	0	0	0	0
3311	19	19	19	19	19	81	26	8	2	8	0	27	19	11	19	0	28	54	68	54
3312	0	0	0	0	0	27	27	9	0	9	65	65	91	10	25	7	7	0	90	65
3313	0	0	0	0	0	15	15	6	0	6	78	32	10	11	17	7	53	84	89	77

Table L-2 (continued)
Alternative Land Allocations for Each WAA Among Four General LUD Groupings

Percent of WAA in Each Alternative Allocated to Four General LUD Groupings

WAA	Wilderness					Natural Setting					Moderate Development					Intensive Development				
	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P
3314	0	0	0	0	0	43	42	5	0	6	40	40	95	12	45	17	17	0	88	48
3315	0	0	0	0	0	36	36	35	26	35	58	57	64	7	47	6	8	1	67	18
3416	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	98	98	98	98	98	2	2	1	2	2	0	0	0	0	0	0	0	1	0	0
3418	70	70	70	70	70	30	30	5	30	30	0	0	3	0	0	0	0	23	0	0
3419	28	28	28	28	28	72	72	62	71	71	0	0	7	0	0	0	0	3	1	1
3420	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
3421	10	10	10	10	10	75	90	72	90	90	14	0	1	0	0	2	0	16	0	0
3523	0	0	0	0	0	98	86	69	21	5	2	12	15	69	34	0	2	16	9	61
3524	0	0	0	0	0	30	28	2	27	0	63	22	7	9	9	7	51	91	63	91
3525	0	0	0	0	0	51	45	14	29	4	47	41	61	22	67	2	14	26	49	29
3526	0	0	0	0	0	80	67	49	25	5	17	19	44	66	60	3	14	7	9	35
3551	0	0	0	0	0	34	34	5	10	5	65	43	9	21	26	1	23	87	69	69
3627	0	0	0	0	0	31	31	27	29	28	68	56	10	10	17	1	13	63	62	55
3628	0	0	0	0	0	99	100	99	99	99	1	0	1	0	0	0	0	0	1	0
3629	0	0	0	0	0	70	55	69	26	7	17	17	3	29	14	13	29	28	45	78
3630	0	0	0	0	0	98	39	8	1	6	2	25	89	14	14	0	36	2	86	80
3731	0	0	0	0	0	47	47	31	30	88	52	10	6	5	6	0	43	63	65	7
3732	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
3733	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	0	0	0	0	0	100	100	100	21	100	0	0	0	12	0	0	0	0	67	0
3835	0	0	0	0	0	36	36	9	45	8	47	47	91	42	92	17	17	0	13	0
3836	34	34	34	34	34	61	61	5	26	4	5	5	60	7	61	0	0	0	33	0
3837	99	99	99	99	99	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
3938	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	0	0	0	0	0	99	59	54	57	56	1	41	26	40	26	0	0	20	3	18

Table L-2 (continued)

Alternative Land Allocations for Each WAA Among Four General LUD Groupings

	Percent of WAA in Each Alternative Allocated to Four General LUD Groupings																			
	Wilderness					Natural Setting					Moderate Development					Intensive Development				
WAA	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P	A	B	C	D	P
4252	0	0	0	0	0	100	11	1	0	9	0	89	11	100	16	0	0	88	0	75
4253	0	0	0	0	0	100	10	11	0	10	0	84	22	83	32	0	6	67	17	58
4256	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4302	0	0	0	0	0	100	37	2	100	2	0	63	98	0	98	0	0	0	0	0
4304	0	0	0	0	0	100	100	100	0	100	0	0	0	100	0	0	0	0	0	0
4407	0	0	0	0	0	100	100	100	97	100	0	0	0	3	0	0	0	0	0	0
4408	0	0	0	0	0	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0
4503	4	4	4	4	4	96	95	95	95	95	0	0	0	0	0	0	0	0	0	0
4504	0	0	0	0	0	100	100	100	87	100	0	0	0	13	0	0	0	0	0	0
4505	44	44	44	44	44	56	56	56	56	56	0	0	0	0	0	0	0	0	0	0
4506	99	99	99	99	99	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
4508	15	15	15	15	15	78	71	65	68	66	6	14	8	4	8	0	0	11	12	11
4607	86	86	86	86	86	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0
5012	0	0	0	0	0	25	31	8	21	32	53	12	13	11	8	22	57	79	67	60
5013	0	0	0	0	0	67	64	53	2	53	22	10	5	9	5	12	26	42	88	41
5014	0	0	0	0	0	27	32	22	9	22	73	10	8	10	78	0	58	69	81	0
5015	100	100	100	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	98	98	98	98	98	0	2	2	0	2	2	0	0	0	0	0	0	0	2	0
5017	49	49	49	49	49	51	12	7	0	51	0	28	34	4	0	0	11	11	47	0
5018	0	0	0	0	0	64	60	64	32	64	24	9	5	7	35	12	31	31	61	1
5130	0	0	0	0	0	44	39	27	16	27	17	9	8	8	8	39	52	65	76	65
5131	0	0	0	0	0	38	37	29	13	29	19	15	16	11	16	43	48	55	77	55
5132	0	0	0	0	0	15	9	7	10	7	36	25	8	12	12	49	67	85	78	81
5133	0	0	0	0	0	100	23	5	16	15	0	23	55	7	48	0	54	40	76	37
5134	0	0	0	0	0	26	11	6	0	9	27	20	9	10	9	48	69	84	90	82
5135	0	0	0	3	0	45	42	2	55	2	35	29	10	6	10	20	29	88	36	88
5136	0	0	0	0	0	18	18	5	14	5	67	48	44	8	44	15	34	50	77	50
5137	94	94	94	95	94	3	2	0	2	0	2	2	0	0	0	1	2	5	3	5
5138	0	0	0	0	0	34	6	4	6	4	52	53	42	35	42	14	41	55	59	55

Table L-3

Estimated Changes in Sitka Black-tailed Deer Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	2029	1964	1964	1959	1959	1853	1964	1964	1964	1901	1960	1953	1944	1821	1964	1964	1957	1894	1964	1964	1957	1895
303	2179	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116
404	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063	3063
405	2202	2103	2032	1963	1927	1594	2027	1951	1913	1573	1955	1935	1915	1535	1941	1858	1834	1398	1977	1933	1912	1540
406	2937	2659	2659	2569	2485	1706	2659	2616	2502	1693	2659	2592	2527	1526	2659	2471	2408	1173	2659	2571	2511	1533
407	1134	1126	1126	1126	1117	1068	1121	1111	1046	748	1126	1126	1042	643	1080	1067	1001	677	1126	1126	1043	649
408	490	478	478	478	478	452	478	478	478	452	478	478	478	452	478	478	476	415	478	478	478	452
509	1454	1385	1385	1364	1295	1057	1385	1385	1347	1088	1385	1385	1332	977	1366	1337	1288	993	1385	1374	1303	938
510	2652	1947	1947	1693	1599	1167	1882	1850	1687	1153	1929	1764	1684	940	1737	1567	1484	774	1947	1756	1675	1011
511	307	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306
612	1924	1894	1894	1894	1865	1272	1894	1894	1726	1240	1894	1894	1685	986	1894	1894	1894	1061	1894	1894	1842	1008
613	1616	1560	1560	1560	1538	1490	1560	1560	1527	1488	1560	1560	1343	933	1544	1544	1535	1368	1560	1560	1465	981
614	631	631	568	568	528	466	568	568	531	466	500	500	398	260	570	570	560	466	495	495	405	265
715	801	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792	792
716	301	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295	295
717	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488	488
718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
719	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304
820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
821	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209	1209
822	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369	3369
823	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594	2594
824	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
825	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
826	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
901	2260	2237	2237	2237	1574	1468	2237	2237	1537	1400	2237	2237	1262	1038	2237	2216	1392	971	2237	2237	1461	1324
902	6296	6296	6296	6296	6243	6228	6296	6296	6243	6228	6296	6278	6170	6096	6270	6270	6148	6032	6296	6296	6296	6296
1003	3644	2919	1966	1939	1699	1010	2020	2019	1707	997	1929	1796	1542	787	1886	1473	1155	341	2839	2173	1519	787
1105	6058	6033	6033	6033	5172	4488	5979	5974	5895	5743	6033	5778	4097	3088	5749	5520	4404	2829	5919	5713	4095	3228
1106	432	432	417	417	389	385	418	411	327	294	419	388	302	281	388	316	163	136	429	428	420	418
1107	7033	6915	6888	6882	6198	6062	6915	6865	5881	5464	6906	6237	4369	3892	6848	6037	4285	3953	6915	6648	5521	5111
1108	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866	3866
1209	4010	4010	4010	3940	3536	3453	3991	3916	3564	3496	4010	3829	2874	2540	3879	3616	2453	2075	4010	3933	3555	3487
1210	2600	2600	2600	2528	2130	2069	2600	2510	2017	1863	2600	2486	1844	1618	2549	2307	1265	951	2600	2486	1843	1618
1211	2204	2187	2009	1960	1701	1103	2050	1940	1651	1043	1989	1907	1601	967	1858	1760	1406	661	2219	1932	1625	967
1212	1365	1362	1362	1331	1205	1199	1362	1326	1203	1197	1362	1339	994	885	1362	1360	1323	1317	1362	1311	1084	1073
1213	1208	1197	1153	1117	1016	955	1151	1116	1026	976	1108	968	750	656	1121	1055	955	903	1093	944	738	656
1214	1934	1749	1648	1574	1346	1027	1647	1569	1342	1026	1845	1443	965	732	1664	1348	871	622	1805	1426	976	732
1315	3780	2838	2813	2545	1716	1329	2801	2470	1695	1315	2687	2345	1512	1130	2762	2434	1400	981	2659	2403	1528	1152
1316	828	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827	827
1317	1793	1093	1093	1093	1023	850	1088	1067	996	793	1069	1003	750	503	960	913	716	520	992	961	727	510
1318	1860	1796	1796	1796	1094	857	1796	1796	1123	885	1796	1796	1233	719	1796	1796	1377	787	1796	1796	989	688

Table L-3 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	3495	2857	2857	2808	2216	1745	2857	2665	1942	1458	2738	2273	1540	914	2857	2763	1955	1525	2647	2423	1795	1281
1323	1996	1981	1863	1823	1568	1501	1880	1863	1568	1501	1833	1784	1573	1427	1760	1738	1493	1266	1820	1779	1511	1427
1332	3056	2805	2769	2719	2355	2210	2805	2784	2277	2062	2769	2603	1983	1594	2708	2591	2098	1761	2711	2591	1880	1600
1420	1718	1035	967	842	520	311	970	758	521	312	968	736	476	250	932	828	443	234	829	758	480	260
1421	3733	3073	3200	2777	2157	1708	3249	2692	1865	1326	3013	2599	1635	1080	3022	2588	1389	809	2947	2715	1845	1362
1422	5717	4412	4178	3691	3121	2464	4247	3291	2956	2027	3479	3107	2749	1819	3826	3226	2093	1162	4391	3749	2584	1626
1524	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726	726
1525	3617	2397	1517	1414	1299	755	1520	1520	1298	754	1390	1270	1161	579	1353	1223	1010	342	2075	1344	1235	579
1526	2891	2772	2772	2760	2746	2722	2772	2726	2604	2483	2750	2665	2537	2390	2738	2621	2451	2292	2731	2657	2528	2377
1527	2027	1730	1600	1447	1267	1004	1602	1469	1253	936	1572	1373	1147	692	1552	1340	1005	582	1357	1321	1179	797
1528	439	378	378	378	370	325	378	378	359	295	378	368	316	213	378	378	315	210	378	361	327	234
1529	3121	2501	2153	1936	1803	1392	2083	1909	1704	1195	2116	1860	1602	1076	2397	2117	1772	1270	1935	1774	1586	1078
1530	2587	1861	1861	1719	1341	822	1861	1821	1395	806	1861	1770	1412	766	1861	1757	1214	571	1737	1666	1390	764
1531	3230	2623	2090	1900	1674	1365	2088	1854	1660	1365	1820	1663	1459	1139	1483	1162	756	353	2052	1831	1525	1221
1601	1398	1398	1299	1299	1010	859	1300	1300	1019	859	1288	1288	932	683	1283	1283	977	823	1312	1266	966	683
1602	804	793	793	793	793	793	793	793	793	793	793	793	793	793	742	742	505	368	808	808	588	447
1603	659	624	561	561	530	483	552	543	507	446	559	544	500	410	529	515	468	398	546	544	513	442
1604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1605	1081	840	840	840	792	680	840	840	722	506	840	838	724	492	840	839	711	516	840	840	745	506
1706	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280
1707	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865	865
1708	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969	969
1809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1810	689	689	624	555	467	418	674	656	483	392	689	689	506	272	689	689	538	372	689	689	527	294
1811	692	685	635	596	547	519	647	639	559	517	675	675	546	424	633	633	543	462	664	656	573	488
1812	816	812	813	808	783	755	811	802	785	760	809	798	752	700	803	800	769	738	789	777	759	712
1813	418	250	250	250	250	250	250	250	250	250	236	232	210	198	221	219	206	197	233	233	199	198
1814	373	365	365	360	332	306	365	361	335	306	365	365	337	297	365	365	332	287	352	347	337	297
1815	335	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333	333
1816	716	716	673	625	548	484	713	697	619	484	693	677	589	454	677	663	558	410	670	654	587	469
1817	1625	1625	1625	1625	1553	1257	1625	1625	1566	1256	1625	1625	1381	715	1625	1625	1625	1223	1625	1625	1451	837
1901	3679	3544	3299	3174	2639	2382	3044	2947	2605	2372	3090	2764	2316	1924	3006	2541	2184	1621	3325	3178	2398	1927
1902	272	261	247	226	192	165	261	257	223	165	260	253	213	152	246	237	178	95	247	240	208	152
1903	2863	2675	2675	2644	2247	1781	2644	2484	2181	1670	2633	2365	1956	1392	2497	2264	1913	1317	2666	2416	2004	1458
1904	830	627	611	581	567	493	608	577	557	509	605	540	460	321	552	413	359	171	607	550	455	348
1905	3585	2974	2862	2567	2259	1596	2862	2379	1970	1596	2812	2255	1829	1560	2707	2101	1743	1362	2882	2331	1872	1560
1906	917	793	673	654	640	565	758	745	724	565	743	708	632	442	693	633	370	105	787	787	727	573
1910	3602	3588	3586	3571	3509	3479	3552	3541	3503	3478	3561	3521	3465	3416	3554	3484	3430	3346	3589	3572	3478	3422
2007	3417	2811	2767	2587	2241	1856	2687	2309	2057	1679	2669	2192	1895	1440	2688	2152	1821	1356	2777	2330	2057	1647
2008	366	366	366	366	366	366	324	304	261	213	308	288	242	186	326	304	255	203	310	310	265	213
2202	136	136	136	136	136	136	85	85	85	85	85	85	85	85	128	128	128	128	136	136	136	136
2203	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-3 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2305	285	285	285	285	218	188	285	285	269	188	285	285	207	159	285	285	216	188	285	285	161	146
2306	171	165	165	165	117	96	165	165	162	96	164	164	86	67	165	165	107	93	161	143	74	67
2408	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
2409	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163	163
2410	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2411	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2412	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2413	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2514	362	289	289	289	288	288	288	269	246	245	270	270	238	178	288	270	244	242	278	278	263	212
2515	422	422	422	422	422	422	422	422	422	422	422	422	422	422	410	409	393	392	422	422	422	422
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	139	139	128	128	128	124	116	116	116	111	116	116	111	111	107	106	99	94	124	124	124	124
2518	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2519	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2620	78	78	78	78	78	78	78	78	78	78	78	78	78	78	66	51	51	51	78	78	78	78
2621	166	166	166	166	166	166	166	166	166	166	166	166	166	166	149	102	102	102	166	166	166	166
2722	797	796	796	796	793	793	796	796	793	793	796	796	789	774	793	792	773	772	796	796	794	774
2823	186	186	119	119	119	111	125	125	125	106	103	103	103	103	113	113	113	83	103	103	103	103
2824	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2825	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2926	472	472	472	472	472	447	472	472	361	290	472	472	293	255	472	472	406	207	459	416	285	255
2927	538	538	538	501	455	434	538	529	457	434	522	495	268	229	538	538	441	411	529	479	312	229
3001	3831	3408	3288	3288	3222	3206	3178	3178	3082	3060	2415	2283	2209	2124	2412	2408	2374	2247	2750	2741	2731	2636
3002	1100	861	861	861	784	770	832	832	763	750	787	756	743	712	764	764	739	693	826	826	826	779
3003	1588	1530	1392	1392	1317	1257	1327	1327	1227	1171	1143	1063	1046	961	1104	1104	1088	946	1279	1279	1253	1130
3104	3440	3070	3020	3020	2921	2776	2982	2982	2866	2694	2448	2281	2117	1929	2487	2470	2460	2327	2568	2490	2394	2106
3105	2438	2429	2338	2338	2334	2334	2362	2362	2358	2358	1996	1994	1994	1990	1944	1944	1938	1931	2340	2340	2340	2336
3206	1017	1017	1017	1017	1017	1017	1017	1017	1017	1017	1015	1015	1015	1015	842	842	842	842	1015	1015	1015	1015
3207	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812	812
3308	4189	3160	2921	2737	2502	1870	2814	2712	2447	1844	2484	2378	2208	1635	2931	2669	2212	1537	2800	2464	2244	1635
3309	960	960	960	931	911	762	934	898	876	762	854	797	775	762	960	920	894	744	798	797	786	762
3310	1238	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174	1174
3311	1466	1443	1443	1443	1443	1443	1269	1269	1224	1192	1205	1134	1058	1047	1092	1062	1014	964	1136	1136	1061	1045
3312	485	473	435	435	381	368	423	423	378	368	377	350	338	327	331	331	324	293	359	359	359	336
3313	2281	1614	1273	1273	970	880	1273	1273	967	880	955	946	921	778	1249	1128	842	677	1213	1078	930	778
3314	998	926	865	865	791	773	848	848	787	772	679	619	593	568	595	594	580	519	652	652	652	601
3315	1428	1328	1068	1017	902	837	977	977	876	837	998	965	874	807	1084	1050	743	650	1081	961	883	818
3416	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821	1821
3417	3028	3028	3028	3028	3028	3028	3028	3028	3028	3028	3006	3006	3006	3006	3028	3028	3028	3028	3028	3028	3028	3028
3418	1817	1817	1817	1817	1817	1817	1817	1817	1817	1817	1685	1685	1685	1684	1817	1817	1817	1817	1817	1817	1817	1817
3419	760	760	760	760	760	760	760	760	760	760	733	733	733	733	760	760	760	760	760	760	760	760

Table L-3 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
3421	835	835	821	821	809	809	835	835	835	835	784	784	784	784	835	835	833	833	833	833	833	833
3523	1421	1342	1334	1334	1327	1316	1307	1285	1234	1169	1254	1159	1115	998	1206	1181	1032	837	1194	1041	962	753
3524	260	260	260	260	217	176	260	260	212	173	260	241	185	112	260	260	209	173	214	214	177	112
3525	2509	2149	1933	1933	1705	1363	2030	1910	1659	1250	2012	1687	1496	997	1816	1816	1489	992	1666	1493	1356	972
3526	1434	1213	1136	1136	1054	984	1129	1095	982	873	975	959	894	758	1000	971	821	632	1027	866	738	566
3551	1999	1768	1738	1674	1338	1094	1677	1610	1278	1033	1597	1481	1133	673	1714	1573	1015	685	1314	1314	1080	673
3627	1011	899	826	779	720	560	798	772	705	553	720	695	654	516	833	776	676	529	796	715	662	516
3628	1101	1093	1093	1093	1093	1092	1093	1093	1093	1093	1093	1092	1092	1092	1093	1093	1092	1092	1093	1093	1092	1092
3629	1942	1798	1798	1765	1736	1524	1757	1680	1636	1395	1618	1527	1490	1470	1798	1723	1612	1174	1293	1290	1079	1007
3630	527	527	527	527	526	520	532	519	488	454	493	422	402	342	463	429	340	253	565	455	419	333
3731	1217	1149	1026	1003	950	921	983	982	936	918	901	878	815	770	933	909	690	623	1059	1016	988	965
3732	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
3733	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798	1798
3734	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	1753	1753	1753	1753	2026	2026	2026	2026
3835	1080	1080	1068	1023	1007	812	1032	991	976	797	1092	1070	832	639	1075	981	939	833	889	889	790	589
3836	1812	1812	1792	1784	1782	1750	1775	1764	1759	1711	1812	1793	1389	1059	1760	1513	1404	1126	1513	1513	1357	1042
3837	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233	1233
3938	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159	3159
3939	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854	2854
3940	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580	2580
4041	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165	2165
4042	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626	2626
4043	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755	1755
4044	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315	1315
4054	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266	2266
4055	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616
4145	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196	1196
4146	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
4147	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942	942
4148	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
4149	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256	1256
4150	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891	891
4222	2258	2217	2217	2217	2217	2217	2226	2105	2004	1824	2163	1963	1820	1661	2150	2032	1958	1801	2008	1963	1844	1739
4252	454	454	454	454	454	454	454	414	361	283	454	363	308	234	442	344	317	229	381	373	314	269
4253	1162	1026	1026	1026	1026	1026	969	838	730	577	942	795	716	599	868	700	632	466	823	792	697	615
4256	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
4302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4503	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-3 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4505	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4506	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4508	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4607	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	6016	5071	4977	4385	3906	2667	4759	4278	3738	2780	4317	3866	3272	2178	4266	3907	3323	2290	4353	4044	3705	2749
5013	2221	2197	2197	2155	2000	1893	2197	2197	1970	1857	2197	2197	1850	1685	2197	2143	1264	797	2197	2197	1855	1694
5014	2415	2357	2090	1876	1549	1323	2212	2135	1555	1341	2096	2096	1455	1216	2062	2009	1246	960	2060	1970	1454	1216
5015	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313
5016	3187	3162	3157	3146	3128	3117	3162	3162	3162	3162	3162	3162	3162	3162	3160	3158	3128	3117	3162	3162	3162	3162
5017	7820	7820	7818	7818	7817	7817	7877	7877	7317	6375	7862	7862	7215	6128	7657	7621	6813	5591	7812	7811	7808	7807
5018	1609	1558	1558	1501	1357	1257	1558	1558	1359	1227	1558	1558	1349	1257	1558	1558	1203	915	1558	1551	1349	1257
5130	2924	2898	2748	2748	2514	2353	2759	2759	2543	2312	2692	2685	2453	2172	2685	2685	2335	1916	2696	2677	2444	2171
5131	1526	1392	1475	1475	1274	1156	1463	1463	1275	1134	1450	1443	1254	1094	1456	1456	1156	854	1470	1451	1262	1104
5132	1226	982	928	928	750	646	914	914	735	604	890	882	723	583	891	891	717	575	902	884	724	583
5133	1686	1664	1664	1664	1664	1664	1664	1664	1664	1172	1664	1664	1336	1038	1664	1664	1371	1065	1664	1664	1359	1090
5134	3868	3617	3350	3350	3121	2902	3459	3459	3232	2774	3461	3461	3245	2708	3455	3455	3165	2538	3425	3425	3216	2721
5135	963	963	947	947	821	737	926	926	807	711	907	892	797	686	907	907	817	732	919	892	797	686
5136	1170	1014	1014	1014	797	583	1014	1014	811	583	1014	1001	771	505	1004	1004	758	524	1014	1002	772	506
5137	544	544	543	543	538	538	541	541	535	535	542	542	531	531	543	543	538	538	542	542	531	531
5138	1689	1550	1510	1510	1162	998	1440	1401	1109	820	1391	1358	1051	765	1408	1370	1059	761	1355	1355	1052	766

Table L-4

Estimated Changes in Sitka Black-tailed Deer Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means deer are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	97	97	97	97	91	97	97	97	94	97	96	96	90	97	97	96	93	97	97	96	93
303	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	96	92	89	88	72	92	89	87	71	89	88	87	70	88	84	83	63	90	88	87	70
406	91	91	87	85	58	91	89	85	58	91	88	86	52	91	84	82	40	91	88	85	52
407	99	99	99	99	94	99	98	92	66	99	99	92	57	95	94	88	60	99	99	92	57
408	98	98	98	98	92	98	98	98	92	98	98	98	92	98	98	97	85	98	98	98	92
509	95	95	94	89	73	95	95	93	75	95	95	92	67	94	92	89	68	95	94	90	65
510	73	73	64	60	44	71	70	64	43	73	67	63	35	65	59	56	29	73	66	63	38
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	98	98	98	97	66	98	98	90	64	98	98	88	51	98	98	98	55	98	98	96	52
613	97	97	97	95	92	97	97	94	92	97	97	83	58	96	96	95	85	97	97	91	61
614	100	90	90	84	74	90	90	84	74	79	79	63	41	90	90	89	74	78	78	64	42
715	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
716	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
826	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
901	99	99	99	70	65	99	99	68	62	99	99	56	46	99	98	62	43	99	99	65	59
902	100	100	100	99	99	100	100	99	99	100	100	98	97	100	100	98	96	100	100	100	100
1003	80	54	53	47	28	55	55	47	27	53	49	42	22	52	40	32	9	78	60	42	22
1105	100	100	100	85	74	99	99	97	95	100	95	68	51	95	91	73	47	98	94	68	53
1106	100	97	97	90	89	97	95	76	68	97	90	70	65	90	73	38	31	99	99	97	97
1107	98	98	98	88	86	98	98	84	78	98	89	62	55	97	86	61	56	98	95	79	73
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	98	88	86	100	98	89	87	100	95	72	63	97	90	61	52	100	98	89	87
1210	100	100	97	82	80	100	97	78	72	100	96	71	62	98	89	49	37	100	96	71	62
1211	99	91	89	77	50	93	88	75	47	90	87	73	44	84	80	64	30	101	88	74	44
1212	100	100	98	88	88	100	97	88	88	100	98	73	65	100	100	97	96	100	96	79	79
1213	99	95	92	84	79	95	92	85	81	92	80	62	54	93	87	79	75	90	78	61	54
1214	90	85	81	70	53	85	81	69	53	95	75	50	38	86	70	45	32	93	74	50	38
1315	75	74	67	45	35	74	65	45	35	71	62	40	30	73	64	37	26	70	64	40	30
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	61	61	61	57	47	61	60	56	44	60	56	42	28	54	51	40	29	55	54	41	28

Table L-4 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means deer are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	97	97	97	59	46	97	97	60	48	97	97	66	39	97	97	74	42	97	97	53	37
1319	82	82	80	63	50	82	76	56	42	78	65	44	26	82	79	56	44	76	69	51	37
1323	99	93	91	79	75	94	93	79	75	92	89	79	71	88	87	75	63	91	89	76	71
1332	92	91	89	77	72	92	91	75	67	91	85	65	52	89	85	69	58	89	85	62	52
1420	60	56	49	30	18	56	44	30	18	56	43	28	15	54	48	26	14	48	44	28	15
1421	82	86	74	58	46	87	72	50	36	81	70	44	29	81	69	37	22	79	73	49	36
1422	77	73	65	55	43	74	58	52	35	61	54	48	32	67	56	37	20	77	66	45	28
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	66	42	39	36	21	42	42	36	21	38	35	32	16	37	34	28	9	57	37	34	16
1526	96	96	95	95	94	96	94	90	86	95	92	88	83	95	91	85	79	94	92	87	82
1527	85	79	71	63	50	79	72	62	46	78	68	57	34	77	66	50	29	67	65	58	39
1528	86	86	86	84	74	86	86	82	67	86	84	72	49	86	86	72	48	86	82	74	53
1529	80	69	62	58	45	67	61	55	38	68	60	51	34	77	68	57	41	62	57	51	35
1530	72	72	66	52	32	72	70	54	31	72	68	55	30	72	68	47	22	67	64	54	30
1531	81	65	59	52	42	65	57	51	42	56	51	45	35	46	36	23	11	64	57	47	38
1601	100	93	93	72	61	93	93	73	61	92	92	67	49	92	92	70	59	94	91	69	49
1602	99	99	99	99	99	99	99	99	99	99	99	99	99	92	92	63	46	100	100	73	56
1603	95	85	85	80	73	84	82	77	68	85	83	76	62	80	78	71	60	83	83	78	67
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	78	78	78	73	63	78	78	67	47	78	78	67	46	78	78	66	48	78	78	69	47
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1810	100	91	81	68	61	98	95	70	57	100	100	73	39	100	100	78	54	100	100	76	43
1811	99	92	86	79	75	93	92	81	75	98	98	79	61	91	91	78	67	96	95	83	71
1812	100	100	99	96	93	99	98	96	93	99	98	92	86	98	98	94	90	97	95	93	87
1813	60	60	60	60	60	60	60	60	60	56	56	50	47	53	52	49	47	56	56	48	47
1814	98	98	97	89	82	98	97	90	82	98	98	90	80	98	98	89	77	94	93	90	80
1815	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1816	100	94	87	77	68	100	97	86	68	97	95	82	63	95	93	78	57	94	91	82	66
1817	100	100	100	96	77	100	100	96	77	100	100	85	44	100	100	100	75	100	100	89	52
1901	96	90	86	72	65	83	80	71	64	84	75	63	52	82	69	59	44	90	86	65	52
1902	96	91	83	71	61	96	94	82	61	96	93	78	56	90	87	65	35	91	88	76	56
1903	93	93	92	78	62	92	87	76	58	92	83	68	49	87	79	67	46	93	84	70	51
1904	76	74	70	68	59	73	70	67	61	73	65	55	39	67	50	43	21	73	66	55	42
1905	83	80	72	63	45	80	66	55	45	78	63	51	44	76	59	49	38	80	65	52	44
1906	86	73	71	70	62	83	81	79	62	81	77	69	48	76	69	40	11	86	86	79	62
1910	100	100	99	97	97	99	98	97	97	99	98	96	95	99	97	95	93	100	99	97	95
2007	82	81	76	66	54	79	68	60	49	78	64	55	42	79	63	53	40	81	68	60	48
2008	100	100	100	100	100	89	83	71	58	84	79	66	51	89	83	70	55	85	85	72	58

Table L-4 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means deer are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	100	100	100	100	100	63	63	63	63	63	63	63	63	94	94	94	94	100	100	100	100
2203	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2305	100	100	100	76	66	100	100	94	66	100	100	73	56	100	100	76	66	100	100	56	51
2306	96	96	96	68	56	96	96	95	56	96	96	50	39	96	96	63	54	94	84	43	39
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2411	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2413	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2514	80	80	80	80	80	80	74	68	68	75	75	66	49	80	75	67	67	77	77	73	59
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	97	97	93	93	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	92	92	92	89	83	83	83	80	83	83	80	80	77	76	71	68	89	89	89	89
2518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	85	65	65	65	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	90	61	61	61	100	100	100	100
2722	100	100	100	99	99	100	100	99	99	100	100	99	97	99	99	97	97	100	100	100	97
2823	100	64	64	64	60	67	67	67	57	55	55	55	55	61	61	61	45	55	55	55	55
2824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2926	100	100	100	100	95	100	100	76	61	100	100	62	54	100	100	86	44	97	88	60	54
2927	100	100	93	85	81	100	98	85	81	97	92	50	43	100	100	82	76	98	89	58	43
3001	89	86	86	84	84	83	83	80	80	63	60	58	55	63	63	62	59	72	72	71	69
3002	78	78	78	71	70	76	76	69	68	72	69	68	65	69	69	67	63	75	75	75	71
3003	96	88	88	83	79	84	84	77	74	72	67	66	61	70	70	69	60	81	81	79	71
3104	89	88	88	85	81	87	87	83	78	71	66	62	56	72	72	72	68	75	72	70	61
3105	100	96	96	96	96	97	97	97	97	82	82	82	82	80	80	79	79	96	96	96	96
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	83	83	83	83	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	75	70	65	60	45	67	65	58	44	59	57	53	39	70	64	53	37	67	59	54	39
3309	100	100	97	95	79	97	94	91	79	89	83	81	79	100	96	93	78	83	83	82	79
3310	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
3311	98	98	98	98	98	87	87	83	81	82	77	72	71	74	72	69	66	77	77	72	71
3312	98	90	90	79	76	87	87	78	76	78	72	70	67	68	68	67	60	74	74	74	69
3313	71	56	56	43	39	56	56	42	39	42	41	40	34	55	49	37	30	53	47	41	34
3314	93	87	87	79	77	85	85	79	77	68	62	59	57	60	60	58	52	65	65	65	60
3315	93	75	71	63	59	68	68	61	59	70	68	61	57	76	74	52	46	76	67	62	57
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-4 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means deer are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	93	93	93	93	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	96	96	96	96	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	98	98	97	97	100	100	100	100	94	94	94	94	100	100	100	100	100	100	100	100
3523	94	94	94	93	93	92	90	87	82	88	82	78	70	85	83	73	59	84	73	68	53
3524	100	100	100	83	68	100	100	82	67	100	93	71	43	100	100	80	67	82	82	68	43
3525	86	77	77	68	54	81	76	66	50	80	67	60	40	72	72	59	40	66	60	54	39
3526	85	79	79	74	69	79	76	68	61	68	67	62	53	70	68	57	44	72	60	51	39
3551	88	87	84	67	55	84	81	64	52	80	74	57	34	86	79	51	34	66	66	54	34
3627	89	82	77	71	55	79	76	70	55	71	69	65	51	82	77	67	52	79	71	65	51
3628	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
3629	93	93	91	89	78	90	87	84	72	83	79	77	76	93	89	83	60	67	66	56	52
3630	100	100	100	100	99	101	98	93	86	94	80	76	65	88	81	65	48	107	86	80	63
3731	94	84	82	78	76	81	81	77	75	74	72	67	63	77	75	57	51	87	83	81	79
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	87	87	87	87	100	100	100	100
3835	100	99	95	93	75	96	92	90	74	101	99	77	59	100	91	87	77	82	82	73	55
3836	100	99	98	98	97	98	97	97	94	100	99	77	58	97	83	77	62	83	83	75	58
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	98	98	98	98	98	99	93	89	81	96	87	81	74	95	90	87	80	89	87	82	77
4252	100	100	100	100	100	100	91	80	62	100	80	68	52	97	76	70	50	84	82	69	59
4253	88	88	88	88	88	83	72	63	50	81	68	62	52	75	60	54	40	71	68	60	53
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-4 (continued)

Estimated Changes in Sitka Black-tailed Deer Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means deer are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4503	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5012	84	83	73	65	44	79	71	62	46	72	64	54	36	71	65	55	38	72	67	62	46
5013	99	99	97	90	85	99	99	89	84	99	99	83	76	99	96	57	36	99	99	84	76
5014	98	87	78	64	55	92	88	64	56	87	87	60	50	85	83	52	40	85	82	60	50
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	99	99	99	98	98	99	99	99	99	99	99	99	99	99	99	98	98	99	99	99	99
5017	100	100	100	100	100	101	101	94	82	101	101	92	78	98	97	87	71	100	100	100	100
5018	97	97	93	84	78	97	97	84	76	97	97	84	78	97	97	75	57	97	96	84	78
5130	99	94	94	86	80	94	94	87	79	92	92	84	74	92	92	80	66	92	92	84	74
5131	91	97	97	83	76	96	96	84	74	95	95	82	72	95	95	76	56	96	95	83	72
5132	80	76	76	61	53	75	75	60	49	73	72	59	48	73	73	58	47	74	72	59	48
5133	99	99	99	99	99	99	99	99	70	99	99	79	62	99	99	81	63	99	99	81	65
5134	94	87	87	81	75	89	89	84	72	89	89	84	70	89	89	82	66	89	89	83	70
5135	100	98	98	85	77	96	96	84	74	94	93	83	71	94	94	85	76	95	93	83	71
5136	87	87	87	68	50	87	87	69	50	87	86	66	43	86	86	65	45	87	86	66	43
5137	100	100	100	99	99	99	99	98	98	100	100	98	98	100	100	99	99	100	100	98	98
5138	92	89	89	69	59	85	83	66	49	82	80	62	45	83	81	63	45	80	80	62	45

Table L-5

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
Central Prince of Wales Island Deer Harvest											
1315	1315	1315							233	130	92
1316	1316	1316							140	77	66
1317	1317	1317							123	28	75
1318	1318	1318							493	347	398
1318	1320	1332								21	23
1318	1321	1323								75	93
1319	1319	1319							285	243	197
			160	355	500	550	821	927	1,276	921	944
Central Prince of Wales Island Deer Hunters											
1315	1315	1315							248	203	176
1316	1316	1316							60	101	84
1317	1317	1317							183	53	107
1318	1318	1318							447	404	481
1318	1320	1332								47	39
1318	1321	1323								86	111
1319	1319	1319							385	300	341
			180	370	520	700	807	978	1,032	922	1,021
Central Prince of Wales Island Deer Hunter-days											
1315	1315	1315							993	814	658
1316	1316	1316							412	251	185
1317	1317	1317							458	69	237
1318	1318	1318							1,919	1,311	1,638
1318	1320	1332								111	77
1318	1321	1323								327	222
1319	1319	1319							1,810	671	993
			1,220	2,760	3,455	3,970	3,204	5,283	5,592	3,553	4,011

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	1980	1982	1983	1984	1985	1986	1987	1988	1989
Chilkat Range Deer Harvest									
2202							0	17	4
2203							0	0	0
2304							0	0	0
2305							9	6	5
2306							0	0	11
	15	60	50	15	30	0	9	23	20
Chilkat Range Deer Hunters									
2202							18	16	13
2203							0	0	0
2304							0	0	0
2305							9	6	10
2306							3	0	5
	40	80	30	25	54	29	30	22	28
Chilkat Range Deer Hunter-days									
2202							87	9	21
2203							0	0	0
2304							0	0	0
2305							14	6	15
2306							16	0	21
	150	260	130	160	82	57	117	15	57

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
Douglas Island Deer Harvest									
2722	100	120	230	270	317	265	379	319	321
Douglas Island Deer Hunters									
2722	410	580	595	680	820	642	842	735	697
Douglas Island Deer Hunter-days									
2722	1,190	1,850	2,000	2,270	2,840	2,559	2,875	2,299	1,725

1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
Duke Deer Harvest									
303	0	0	0	5	8	36	0	25	0
Duke Deer Hunters									
303	0	0	0	10	22	29	18	19	23
Duke Deer Hunter-days									
303	0	0	0	60	23	474	36	63	33

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
			East & South Baranof Deer Harvest						
3731							130	439	108
3732							19	5	68
3733							140	114	122
3734							92	87	153
	110	210	360	350	408	421	382	645	451
			East & South Baranof Deer Hunters						
3731							115	131	50
3732							30	5	30
3733							80	77	46
3734							76	48	82
	100	150	220	200	203	247	257	251	187
			East & South Baranof Deer Hunter-days						
3731							405	520	150
3732							55	11	107
3733							231	147	205
3734							312	186	357
	280	540	860	940	655	943	1,002	864	819

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				Fanshaw to Stikine Deer Harvest					
1601							0	0	0
1602							0	0	5
1603							0	0	5
1604							0	0	0
1605							24	42	37
1706							10	11	9
1707							0	11	5
1708							0	0	0
	15	5	5	5	25	62	34	64	60
				Fanshaw to Stikine Deer Hunters					
1601							5	0	0
1602							2	5	9
1603							5	11	9
1604							0	0	0
1605							39	95	83
1706							29	11	18
1707							6	17	29
1708							8	12	27
	90	45	45	40	57	89	91	145	162
				Fanshaw to Stikine Deer Hunter-days					
1601							10	0	0
1602							5	26	32
1603							146	11	32
1604							0	0	0
1605							165	317	270
1706							78	21	23
1707							31	65	301
1708							90	91	292
	400	190	130	280	238	523	525	531	951

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
				Gravina Deer Harvest					
101	165	120	150	205	186	294	71	136	101
				Gravina Deer Hunters					
101	470	440	345	500	543	413	237	280	241
				Gravina Deer Hunter-days					
101	1,860	1,670	1,290	1,990	1,503	1,952	665	1,051	597

1990 WAA#	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
				Heceta Deer Harvest					
1003	30	80	60	70	199	103	94	126	128
				Heceta Deer Hunters					
1003	30	90	70	70	115	105	91	124	144
				Heceta Deer Hunter-days					
1003	190	390	285	280	1,074	415	311	282	576

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
						Icy Straight Deer Harvest					
3521	3521	4256								106	104
3522	3522	4222								156	258
3523	3532	4252								316	375
3523	3533	4253								118	201
			285	401	550	544	792	1,292	1,265	696	938
						Icy Straight Deer Hunters					
3521	3521	4256								70	80
3522	3522	4222								79	127
3523	3532	4252								171	196
3523	3533	4253								96	98
			140	215	262	245	273	470	401	353	427
						Icy Straight Deer Hunter-days					
3521	3521	4256								194	234
3522	3522	4222								180	401
3523	3532	4252								686	491
3523	3533	4253								161	232
			939	1,992	1,965	1,582	1,213	3,194	3,459	1,221	1,358

Table L-5 (continued)

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
				Juneau Mainland Deer Harvest					
2408							0	0	0
2409							0	0	0
2410							0	0	0
2411							0	0	0
2412							0	0	0
2413							0	0	0
2514							0	0	0
2515							0	0	0
2516							0	0	0
2517							20	17	10
2518							0	0	0
2519							0	0	0
	40	40	60	10	25	21	20	17	10
				Juneau Mainland Deer Hunters					
2408							0	0	0
2409							5	0	0
2410							0	0	0
2411							0	0	0
2412							0	0	0
2413							0	0	0
2514							83	25	15
2515							58	12	20
2516							0	0	0
2517							53	36	55
2518							0	0	0
2519							0	0	5
	275	270	155	160	169	105	169	73	95

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	1985	1986	1987	1988	1989
				Juneau Mainland Deer Hunter-days					
2408							0	0	0
2409							24	0	0
2410							0	0	0
2411							0	0	0
2412							0	0	0
2413							0	0	0
2514							161	82	40
2515							82	100	25
2516							0	0	0
2517							92	62	95
2518							0	0	0
2519							0	0	15
	870	830	245	460	258	358	359	244	175

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	1985	1986	1987	1988	1989
					Kosciusko/Sea Otter Sound Deer Harvest						
1422	1531	1531								40	44
1524	1524	1524							3	5	0
1525	1525	1525							46	48	24
1526	1526	1526							66	114	111
			37	74	113	120	169	207	115	207	179
					Kosciusko/Sea Otter Sound Deer Hunters						
1422	1531	1531								30	54
1524	1524	1524							3	11	0
1525	1525	1525							41	38	28
1526	1526	1526							78	106	79
			27	56	77	103	126	153	105	157	142

Table L-5 (continued)

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
					Kosciusko/Sea Otter Sound Deer Hunter-days						
1422	1531	1531								119	156
1524	1524	1524							3	21	0
1525	1525	1525							201	237	84
1526	1526	1526							280	332	372
			181	410	513	587	533	1,053	484	709	612

1990 WAA #	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
				Kruzof Island Deer Harvest					
3104							584	559	133
3105							383	111	78
	250	380	610	470	599	443	967	671	211
				Kruzof Island Deer Hunters					
3104							482	475	241
3105							201	93	95
	280	490	550	480	526	483	594	524	304
				Kruzof Island Deer Hunter-days					
3104							1,774	1,264	430
3105							577	123	268
	910	1,540	2,245	1,760	1,524	1,640	2,351	1,338	698

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
				Kuiu Deer Harvest					
5012							0	0	0
5013							0	0	0
5014							0	0	0
5015							0	0	0
5016							0	0	0
5017							0	0	0
5018							0	0	0
	0	0	0	0	0	0	0	0	0
				Kuiu Deer Hunters					
5012							0	0	0
5013							0	0	0
5014							0	0	0
5015							0	0	0
5016							0	0	0
5017							0	0	0
5018							0	0	0
	0	0	0	0	0	0	0	0	0
				Kuiu Deer Hunter-days					
5012							0	0	0
5013							0	0	0
5014							0	0	0
5015							0	0	0
5016							0	0	0
5017							0	0	0
5018							0	0	0
	0	0	0	0	0	0	0	0	0

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					Kupreanof Deer Harvest				
5130							0	0	0
5131							0	0	0
5132							0	0	0
5133							0	0	0
5134							0	0	0
5135							0	0	0
5136							0	0	0
5137							0	0	0
5138							0	0	0
	0	0	0	0	0	0	0	0	0
					Kupreanof Deer Hunters				
5130							0	0	0
5131							0	0	0
5132							0	0	0
5133							0	0	0
5134							0	0	0
5135							0	0	0
5136							0	0	0
5137							0	0	0
5138							0	0	0
	0	0	0	0	0	0	0	0	0
					Kupreanof Deer Hunter-days				
5130							0	0	0
5131							0	0	0
5132							0	0	0
5133							0	0	0
5134							0	0	0
5135							0	0	0
5136							0	0	0
5137							0	0	0
5138							0	0	0
	0	0	0	0	0	0	0	0	0

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				L. Cleveland Deer Harvest					
612							71	61	76
613							146	61	91
614							8	10	17
715							13	0	5
	5	30	50	140	195	145	238	132	189
				L. Cleveland Deer Hunters					
612							155	100	83
613							218	133	188
614							0	5	23
715							21	7	7
	80	60	165	210	216	268	394	212	260
				L. Cleveland Deer Hunter-days					
612							413	227	196
613							642	613	398
614							58	33	45
715							62	26	76
	260	180	395	610	689	1,002	1,175	899	715

Table L-5 (continued)

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	1980	1982	1983	1984	1985	1986	1987	1988	1989
					Misty Deer Harvest				
716							0	0	0
717							0	0	0
718							0	0	0
719							0	0	0
820							0	0	0
821							12	0	1
822							0	0	0
823							6	0	0
824							0	0	0
825							0	0	0
826							0	0	0
	10	20	0	0	0	0	18	0	1
					Misty Deer Hunters				
716							0	0	5
717							0	0	0
718							0	0	0
719							0	7	5
820							0	7	0
821							6	0	6
822							5	1	8
823							12	7	0
824							0	0	0
825							0	0	0
826							0	0	0
	25	60	15	15	28	26	23	21	24

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
Misty Deer Hunter-days									
716							0	0	0
717							0	0	0
718							0	0	0
719							0	20	5
820							0	20	0
821							18	0	17
822							5	4	32
823							124	7	0
824							0	0	0
825							0	0	0
826							0	0	0
	90	90	50	30	85	111	147	51	54

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
Mitkof Deer Harvest									
2007							0	0	0
2008							0	0	0
	0	0	0	0	0	0	0	0	0
Mitkof Deer Hunters									
2007							0	0	0
2008							0	0	0
	0	0	0	0	0	0	0	0	0
Mitkof Deer Hunter-days									
2007							0	0	0
2008							0	0	0
	0	0	0	0	0	0	0	0	0

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					N. Central Prince of Wales Island Deer Harvest						
1420	1420	1420							219	186	114
1421	1421	1421							537	329	224
1422	1422	1422							494	284	377
			130	270	420	430	1,029	547	1,250	799	716
					N. Central Prince of Wales Island Deer Hunters						
1420	1420	1420							216	178	131
1421	1421	1421							546	310	271
1422	1422	1422							629	397	492
			140	280	390	520	746	715	1,000	779	753
					N. Central Prince of Wales Island Deer Hunter-days						
1420	1420	1420							928	701	460
1421	1421	1421							2,323	955	909
1422	1422	1422							2,507	1,444	1,500
			1,120	2,540	3,170	3,650	4,723	4,458	5,757	3,100	2,841

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
						N. Prince of Wales Deer Harvest					
1527	1527	1527							416	43	12
1527	1530	1530								202	197
1528	1528	1528							72	63	51
1529	1529	1529							294	146	157
			123	246	377	400	564	691	782	454	417

Table L-5 (continued)

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	1985	1986	1987	1988	1989
							N. Prince of Wales Deer Hunters				
1527	1527	1527							478	53	27
1527	1530	1530								199	217
1528	1528	1528							89	65	43
1529	1529	1529							234	155	138
			98	204	360	283	462	560	689	401	374
							N. Prince of Wales Deer Hunter-days				
1527	1527	1527							2,166	175	50
1527	1530	1530								848	1,254
1528	1528	1528							322	215	104
1529	1529	1529							1,142	423	816
			770	1,750	2,187	2,503	2,270	4,491	3,630	1,661	2,224

1990 WAA#	1980	1982	1983	1984	1985	1986	1987	1988	1989
				N. Revilla Deer Harvest					
509							66	59	56
510							7	0	56
511							0	0	0
	70	70	90	30	56	77	73	59	112
				N. Revilla Deer Hunters					
509							218	193	177
510							73	21	129
511							0	0	0
	290	290	325	220	261	212	291	201	265
				N. Revilla Deer Hunter-days					
509							1,102	510	471
510							168	28	478
511							0	0	0
	1,210	1,240	1,305	970	1,052	925	1,270	538	949

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
							NE Chichagof Deer Harvest				
3523	3523	3523								184	157
3524	3524	3524								444	289
3625	3525	3525								364	289
3525	3531	3551								145	307
3626	3626	3526								219	285
			420	590	810	800	1,165	1,901	1,732	1,356	1,327
							NE Chichagof Deer Hunters				
3523	3523	3523								146	151
3524	3524	3524								313	344
3625	3525	3525								231	161
3525	3531	3551								130	255
3626	3626	3526								165	205
			280	430	525	490	546	941	844	749	882
							NE Chichagof Deer Hunter-days				
3523	3523	3523								509	319
3524	3524	3524								1,285	859
3625	3525	3525								913	403
3525	3531	3551								378	538
3626	3626	3526								825	690
			1,740	3,690	3,640	2,930	2,247	5,916	6,397	3,910	2,813

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					North Admiralty Deer Harvest				
3835							435	268	227
3836							478	390	334
3837							39	63	114
	390	360	510	650	921	673	952	739	675

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					North Admiralty Deer Hunters				
3835							472	320	344
3836							457	435	423
3837							56	63	51
	430	570	685	680	823	765	839	729	728
					North Admiralty Deer Hunter-days				
3835							1,815	882	906
3836							1,719	1,241	1,403
3837							198	226	196
	1,860	2,120	2,275	2,380	2,834	2,739	3,732	2,349	2,505

1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					Outside Islands Deer Harvest				
901							52	40	18
902							7	11	20
	40	50	40	90	96	11	59	51	38
					Outside Islands Deer Hunters				
901							46	67	25
902							26	40	27
	60	80	55	110	103	63	72	80	45
					Outside Islands Deer Hunter-days				
901							101	168	44
902							34	84	47
	200	270	240	300	252	175	135	252	97

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				Peril Straight Deer Harvest					
3308							361	187	186
3309							189	161	195
3310							402	272	364
3311							518	330	306
3312							250	180	154
3313							215	125	187
3314									135
3315							218	184	216
	300	370	790	910	1,128	960	2,154	1,666	1,743
				Peril Straight Deer Hunters					
3308							199	119	105
3309							135	105	94
3310							165	235	157
3311							400	231	195
3312							172	164	143
3313							150	97	93
3314									135
3315							108	98	92
	330	460	615	590	616	597	856	834	717
				Peril Straight Deer Hunter-days					
3308							759	409	349
3309							374	261	206
3310							453	668	414
3311							1,416	505	451
3312							406	306	266
3313							356	194	262
3314									300
3315							340	284	240
	1,100	1,610	2,660	2,240	2,050	2,339	4,104	3,079	2,489

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				S. Revilla Deer Harvest					
404							35	13	0
405							12	26	15
406							71	104	39
407							76	104	46
408							0	72	57
	145	100	150	150	184	249	194	319	157
				S. Revilla Deer Hunters					
404							71	13	15
405							41	85	66
406							159	208	136
407							281	270	229
408							0	242	184
	420	330	450	500	554	467	552	580	497
				S. Revilla Deer Hunter-days					
404							484	33	20
405							425	182	162
406							879	480	381
407							1,027	1,066	605
408							82	750	717
	1,740	1,190	2,090	1,860	1,943	2,262	2,897	2,511	1,885

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
							South Shore Tenakee Deer Harvest				
3627	3627	3627							45	112	95
3628	3628	3628							42	71	10
3629	3629	3629							417	232	175
3630	3630	3630							100	31	41
			320	360	675	630	756	935	604	446	321

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

Old MHU#	1989 WAA#	1990 WAA#	1980	1982	1983	1984	1985	1986	1987	1988	1989
							South Shore Tenakee Deer Hunters				
3627	3627	3627							56	87	58
3628	3628	3628							58	45	11
3629	3629	3629							165	132	115
3630	3630	3630							75	18	25
			270	300	395	330	389	516	269	214	185
							South Shore Tenakee Deer Hunter-days				
3627	3627	3627							171	203	143
3628	3628	3628							212	109	13
3629	3629	3629							635	417	430
3630	3630	3630							343	59	55
			1,360	1,370	2,120	1,460	1,573	2,916	1,361	788	641

1990 WAA #	1980	1982	1983	1984	1985	1986	1987	1988	1989
					SE Admiralty Deer Harvest				
3938							263	316	238
3939							405	427	346
3940							225	204	157
	275	580	850	680	788	772	893	947	741
					SE Admiralty Deer Hunters				
3938							203	185	199
3939							216	221	174
3940							149	100	98
	210	460	515	430	409	535	464	469	421
					SE Admiralty Deer Hunter-days				
3938							666	856	844
3939							1,020	936	724
3940							380	298	346
	960	2,260	2,460	1,800	1,832	2,314	2,066	2,090	1,915

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	YEAR 1980	1982	1983	1984	1985	1986	1987	1988	1989
				SE Prince of Wales Deer Harvest					
1209							0	0	0
1210							35	13	20
1211							58	79	133
1212							31	20	46
1213							2	0	10
1214							90	93	80
	75	50	110	110	175	194	215	205	289
				SE Prince of Wales Deer Hunters					
1209							5	7	0
1210							34	31	59
1211							81	62	77
1212							72	9	51
1213							20	33	15
1214							138	73	122
	170	100	160	200	200	238	286	189	309
				SE Prince of Wales Deer Hunter-days					
1209							18	7	0
1210							189	109	117
1211							487	278	760
1212							168	9	162
1213							53	52	20
1214							651	314	323
	790	680	475	1,050	1,894	1,219	1,565	769	1,383

Table L-5 (continued)

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				Seymour Canal Deer Harvest					
4145							146	100	189
4146							239	135	75
4147							595	125	170
4148							311	112	264
4149								141	206
4150								391	291
	560	570	920	950	1,260	1,063	1,293	1,004	1,195
				Seymour Canal Deer Hunters					
4145							97	82	94
4146							127	97	45
4147							713	93	110
4148							245	68	142
4149								140	133
4150								430	345
	550	730	880	860	970	983	1,085	797	715
				Seymour Canal Deer Hunter-days					
4145							554	408	441
4146							451	912	191
4147							2,484	516	396
4148							836	261	678
4149								443	430
4150								1,100	855
	2,440	2,970	3,765	3,110	3,568	3,304	4,326	3,640	2,990

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					Shelter/Lincoln Islands Deer Harvest				
2620							39	25	20
2621							73	36	104
	80	60	50	100	155	131	112	61	124
					Shelter/Lincoln Islands Deer Hunters				
2620							93	38	65
2621							141	131	157
	190	290	140	170	252	311	200	162	202
					Shelter/Lincoln Islands Deer Hunter-days				
2620							205	50	100
2621							415	223	666
	485	830	540	550	737	803	620	273	766

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					Sitka Deer Harvest				
3001							1,247	1,028	554
3002							436	592	638
3003							530	489	458
	800	1,160	1,410	1,810	1,847	1,659	2,214	2,109	1,650
					Sitka Deer Hunters				
3001							970	797	497
3002							605	598	650
3003							555	534	400
	880	1,260	1,215	1,450	1,394	1,461	1,502	1,393	1,088
					Sitka Deer Hunter-days				
3001							4,054	2,192	1,269
3002							2,716	2,165	1,751
3003							1,614	1,162	987
	3,920	6,770	6,200	6,660	4,889	7,412	8,383	5,519	4,008

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				Mainland-S. of Stikine Deer Harvest					
1809							0	0	0
1810							0	12	0
1811							0	0	0
1812							0	0	0
1813							0	0	0
1814							0	0	0
1815							0	0	0
1816							0	0	0
1817							29	25	13
	10	0	15	0	13	8	29	37	13
				Mainland-S. of Stikine Deer Hunters					
1809							0	0	0
1810							6	12	5
1811							6	0	5
1812							6	0	0
1813							13	0	0
1814							0	0	0
1815							0	0	5
1816							0	0	5
1817							48	31	38
	30	20	35	30	43	30	73	43	58
				Mainland-S. of Stikine Deer Hunter-days					
1809							0	0	0
1810							19	12	5
1811							0	0	10
1812							38	0	0
1813							19	0	0
1814							0	0	0
1815							0	0	19
1816							0	0	5
1817							118	47	107
	90	70	70	150	121	38	194	59	146

Table L-5 (continued)

Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				Sumner-Ernest Islands Deer Harvest					
1901							19	0	15
1902							0	0	5
1903							25	42	15
1904							52	120	122
1905							10	11	26
1906							25	38	36
1910								12	15
	90	70	80	130	160	187	131	223	235
				Sumner-Ernest Islands Deer Hunters					
1901							62	13	26
1902							6	12	10
1903							130	115	82
1904							170	190	197
1905							22	11	27
1906							71	35	45
1910								30	17
	210	260	265	420	425	383	380	328	348
				Sumner-Ernest Islands Deer Hunter-days					
1901							143	25	61
1902							6	24	29
1903							424	521	225
1904							460	396	632
1905							43	30	160
1906							198	236	186
1910								139	45
	780	1,000	1,145	1,400	1,033	1,128	1,274	1,371	1,338

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA#	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					SW Coast Islands Deer Harvest				
1105							3	0	5
1106							45	37	34
1107							43	50	50
1108							6	0	6
	20	60	120	110	97	125	96	87	95
					SW Coast Islands Deer Hunters				
1105							15	5	9
1106							24	33	33
1107							73	79	76
1108							6	7	9
	30	116	170	100	99	117	106	109	121
					SW Coast Islands Deer Hunter-days				
1105							29	5	24
1106							66	79	336
1107							128	253	167
1108							12	7	21
	130	390	965	730	231	411	235	343	548

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					Taku to Fanshaw Deer Harvest				
2823							0	0	0
2824							0	13	0
2825							0	0	5
2926							1	9	9
2927							0	0	0
	10	10	10	0	0	16	1	22	14

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					Taku to Fanshaw Deer Hunters				
2823							0	13	10
2824							0	25	0
2825							0	0	5
2926							7	12	13
2927							0	5	6
	20	55	35	40	20	42	7	42	32
					Taku to Fanshaw Deer Hunter-days				
2823							0	13	20
2824							0	50	0
2825							0	0	5
2926							24	90	117
2927							0	11	33
	75	210	95	150	61	58	24	164	175

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
					West Admiralty Deer Harvest				
4041							281	27	43
4042							295	135	79
4043							160	91	42
4044							107	111	199
4054								82	12
4055								116	75
	325	340	500	740	584	520	843	562	448
					West Admiralty Deer Hunters				
4041							121	20	24
4042							108	73	51
4043							114	82	38
4044							105	89	107
4054								32	8
4055								60	55
	250	250	425	490	382	439	366	315	240

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				West Admiralty Deer Hunter-days					
4041							530	45	43
4042							497	258	136
4043							416	257	172
4044							347	259	443
4054								66	8
4055								370	96
	1,140	1,190	2,360	2,890	1,397	1,568	1,791	1,255	899

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				West Baranof Deer Harvest					
3206							286	146	186
3207							183	148	128
	160	220	220	220	292	285	469	294	314
				West Baranof Deer Hunters					
3206							148	104	138
3207							106	105	85
	190	230	240	180	280	239	236	209	191
				West Baranof Deer Hunter-days					
3206							308	236	415
3207							317	796	330
	530	850	870	670	754	726	625	1,032	745

Table L-5 (continued)
Number of Deer Harvested, Number of Hunters, and Number of Hunter-days within ADF&G Deer Management Areas

1990 WAA #	1980	1982	1983	1984	YEAR 1985	1986	1987	1988	1989
				West Chichagof Deer Harvest					
3416							163	148	96
3417							379	268	248
3418							123	78	92
3419							202	100	102
3420							173	104	99
3421								98	109
	400	490	705	690	642	622	1,041	796	745
				West Chichagof Deer Hunters					
3416							132	93	85
3417							217	144	113
3418							87	51	89
3419							132	64	53
3420							66	49	62
3421								55	62
	250	330	395	400	367	387	478	374	347
				West Chichagof Deer Hunter-days					
3416							269	229	245
3417							873	618	459
3418							304	161	223
3419							446	371	237
3420							258	305	205
3421								131	171
	1,280	1,650	1,575	1,870	1,861	1,598	2,149	1,815	1,540

Table L-6

Estimated Changes in Mountain Goat Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
404	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143
405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
406	85	85	84	84	84	71	79	79	77	69	85	85	85	63	85	85	85	65	85	85	85	65
407	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
509	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
510	46	46	46	46	46	46	46	46	46	46	41	41	41	40	41	41	41	40	41	41	41	40
511	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
612	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
613	7	7	7	7	7	7	7	7	7	7	6	6	6	6	7	7	7	7	7	7	7	7
614	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
715	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159
716	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312	312
717	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269
718	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430	430
719	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403	403
820	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167	167
821	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84
822	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457	457
823	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
824	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
825	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316
826	163	163	163	163	163	163	163	163	163	163	143	143	143	143	154	154	154	154	149	149	149	149
901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-6 (continued)
Estimated Changes in Mountain Goat Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1323	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1332	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1422	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1528	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1529	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1601	17	17	17	17	16	13	17	17	16	13	17	17	13	7	17	17	15	12	17	17	17	7
1602	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
1603	117	117	117	117	116	116	117	117	116	116	116	116	115	114	116	116	116	115	117	117	116	116
1604	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
1605	149	149	149	149	148	147	149	149	148	146	149	149	148	146	149	149	147	146	149	149	148	146
1706	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
1707	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
1708	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248	248
1809	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
1810	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
1811	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
1812	107	107	106	106	106	106	107	107	107	107	106	106	106	106	106	106	106	106	106	106	106	106
1813	295	295	295	295	295	295	295	295	295	295	295	295	287	286	295	295	290	290	295	295	288	287
1814	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
1815	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1816	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
1817	3	3	2	2	2	2	2	2	2	2	1	1	1	1	2	2	2	2	1	1	1	1
1901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1910	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2202	20	20	20	20	20	20	20	20	20	20	19	19	19	19	20	20	20	20	19	19	19	19
2203	14	14	14	14	14	14	14	14	14	14	13	13	13	13	14	14	14	14	13	13	13	13

Table L-6 (continued)

Estimated Changes in Mountain Goat Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2305	59	59	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
2306	44	44	43	43	42	42	43	43	42	42	43	43	42	42	43	43	42	42	43	42	42	42
2408	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
2409	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
2410	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
2411	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
2412	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
2413	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
2514	23	23	23	23	23	23	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
2515	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
2516	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
2517	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
2518	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
2519	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181
2620	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2722	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2823	440	440	438	438	438	438	438	438	438	438	431	431	431	431	431	431	431	431	431	431	431	431
2824	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427	427
2825	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352	352
2926	50	50	48	48	47	47	46	46	41	41	46	46	46	41	46	46	41	41	46	46	46	41
2927	88	88	88	88	88	87	88	88	88	87	86	86	85	84	88	88	88	87	87	87	87	85
3001	38	38	37	37	37	37	37	37	37	37	34	34	34	34	37	37	37	37	36	36	36	36
3002	124	124	124	124	124	124	124	124	124	124	123	123	123	123	124	124	124	124	124	124	124	124
3003	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
3104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3206	36	36	36	36	36	36	36	36	36	36	36	36	36	36	34	34	34	34	36	36	36	36
3207	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
3308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3309	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3313	21	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
3314	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
3315	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
3416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-6 (continued)
Estimated Changes in Mountain Goat Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3523	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3551	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3627	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3628	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3629	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3731	98	98	95	95	95	95	95	95	95	95	92	92	92	92	91	91	91	91	94	94	94	94
3732	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
3733	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166
3734	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4252	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4302	39	39	39	39	39	39	39	39	39	39	38	38	38	38	39	39	39	39	38	38	38	38
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
4408	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304	304
4503	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56

Table L-6 (continued)

Estimated Changes in Mountain Goat Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4505	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
4506	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4508	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4607	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
5012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-7

Estimated Changes in Mountain Goat Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent) (a "-" means goats are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
406	100	99	99	99	84	93	93	91	81	100	100	100	74	100	100	100	76	100	100	100	76
407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
510	100	100	100	100	100	100	100	100	100	89	89	89	87	89	89	89	87	89	89	89	87
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
613	100	100	100	100	100	100	100	100	100	86	86	86	86	100	100	100	100	100	100	100	100
614	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
715	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	88	88	88	88	94	94	94	94	91	91	91	91
901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-7 (continued)

Estimated Changes in Mountain Goat Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent) (a "-" means goats are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1317	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1323	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1601	100	100	100	94	76	100	100	94	76	100	100	76	41	100	100	88	71	100	100	100	41
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1603	100	100	100	99	99	100	100	99	99	99	99	98	97	99	99	99	98	100	100	99	99
1604	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1605	100	100	100	99	99	100	100	99	98	100	100	99	98	100	100	99	98	100	100	99	98
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
1811	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1812	100	99	99	99	99	100	100	100	100	99	99	99	99	99	99	99	99	99	99	99	99
1813	100	100	100	100	100	100	100	100	100	100	100	97	97	100	100	98	98	100	100	98	97
1814	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86

Table L-7 (continued)

Estimated Changes in Mountain Goat Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent) (a "-" means goats are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1817	100	67	67	67	67	67	67	67	67	33	33	33	33	67	67	67	67	33	33	33	33
1901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1905	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1906	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2202	100	100	100	100	100	100	100	100	100	95	95	95	95	100	100	100	100	95	95	95	95
2203	100	100	100	100	100	100	100	100	100	93	93	93	93	100	100	100	100	93	93	93	93
2304	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2305	100	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
2306	100	98	98	95	95	98	98	95	95	98	98	95	95	98	98	95	95	98	95	95	95
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2516	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2517	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2823	100	100	100	100	100	100	100	100	100	98	98	98	98	98	98	98	98	98	98	98	98
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	96	96	94	94	92	92	82	82	92	92	92	82	92	92	82	82	92	92	92	82
2927	100	100	100	100	99	100	100	100	99	98	98	97	95	100	100	100	99	99	99	99	97
3001	100	97	97	97	97	97	97	97	97	89	89	89	89	97	97	97	97	95	95	95	95

Table L-7 (continued)

Estimated Changes in Mountain Goat Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent) (a "-" means goats are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3002	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3003	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	94	94	94	94	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3313	100	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
3314	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3315	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3418	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3627	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3731	100	97	97	97	97	97	97	97	97	94	94	94	94	93	93	93	93	96	96	96	96
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3836	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3837	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-7 (continued)

Estimated Changes in Mountain Goat Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent) (a "-" means goats are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4041	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4302	100	100	100	100	100	100	100	100	100	97	97	97	97	100	100	100	100	97	97	97	97
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4508	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-7 (continued)

Estimated Changes in Mountain Goat Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent) (a "-" means goats are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-8
Number of Mountain Goats Harvested (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
405	0	0	0	0	0	0	0	0	405			
612	0	0	0	1	0	0	0	0	612			
613	0	0	0	0	0	0	0	1	613			
614	0	0	0	2	1	0	1	1	614			
715	11	13	19	12	5	8	5	8	715			
700	8	0	0	0	0	0	0	0				
716	3	4	4	1	3	2	2	0	716			
717	12	19	15	11	16	10	10	4	717			
718	0	0	0	0	0	2	0	0	718			
719	1	23	27	23	18	19	28	7	719			
819	11	0	0	0	0	0	0	0				
820	2	3	0	3	2	2	0	1	820			
821	0	1	3	2	0	2	1	0	821			
822	9	5	4	8	5	5	2	4	822			
823	1	0	4	2	1	1	0	2	823			
824	0	0	1	0	0	0	2	0	824			
825	0	0	0	0	0	0	0	0	825			
826	1	0	0	1	2	0	0	0	826			
GMU 1A	59	68	77	66	53	51	51	28				
1601	0	0	0	0	0	0	0	0	1601			
1602	0	1	2	1	0	0	0	0	1602			
1603	0	3	7	5	9	3	2	2	1603			
1604	0	0	0	0	0	0	0	0	1604			
1605	0	4	0	0	2	3	0	4	1605			
1706	0	14	2	10	4	6	6	0	1706			
1707	0	1	5	2	4	0	0	2	1707			
1708	0	7	4	7	7	5	9	12	1708			
1810	0	0	0	0	0	0	0	0	1810			
1811	0	0	0	1	2	2	1	2	1811			
1812	0	0	2	0	1	1	1	5	1812			
1813	0	5	0	0	4	0	7	5	1813			
1814	0	0	0	1	1	0	3	0	1814			
1815	0	0	0	0	0	8	10	4	1815			
1816	0	0	0	0	0	2	0	2	1816			
1817	0	0	0	0	6	2	2	0	1817			
GMU 1B	0	35	22	27	40	32	41	38				
2202	0	0	0	0	0	0	0	1	2202			
2203	0	0	1	0	0	0	3	0	2203			
2304	0	0	0	0	0	0	0	1	2304			
2305	0	0	1	1	1	0	0	0	2305			
2306	0	0	1	1	1	0	0	0	2306			
2408	0	0	0	4	2	0	0	1	2408			
2409	0	0	4	3	1	0	1	1	2409			
2410	0	0	0	1	0	0	2	1	2410			
2411	1	0	1	0	0	0	0	5	2411			
2412	0	0	2	0	0	0	0	0	2412			
2413	0	1	0	0	3	0	0	2	2413			
2514	1	2	0	0	0	0	5	0	2514			
2515	2	2	3	0	0	0	0	0	2515			
2516	0	0	0	0	0	0	0	0	2516			
2517	5	4	6	0	0	0	0	0	2517			
2518	1	0	0	3	3	1	6	2	2518			
2519	0	0	0	0	0	0	0	0	2519			

Table L-8 (continued)
Number of Mountain Goats Harvested (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
2823	0	1	2	0	0	0	0	0	2823			
2824	11	16	10	15	13	26	17	7	2824			
2825	1	4	13	14	5	6	4	5	2825			
2926	0	0	0	0	0	0	1	2	2926			
2927	1	1	0	1	0	2	3	2	2927			
GMU 1C	23	31	44	43	29	35	42	30				
3001	27	35	40	30	26	28	26	17	3001			
3001									3314			
3002	1	0	0	1	1	0	2	0	3002			
3003	16	30	18	16	10	8	16	16	3003			
3013	0	0	0	1	0	0	0	0				
3206	0	0	0	0	0	0	0	0	3206			
3207	0	0	1	0	2	1	2	0	3207			
3313	0	0	1	0	5	0	1	0	3313			
3315	2	2	4	1	1	1	0	1	3315			
3731	2	7	5	7	1	1	0	0	3731			
3732	0	0	0	0	0	0	0	0	3732			
3733	1	1	4	4	3	2	3	2	3733			
GMU 4	49	75	73	60	49	41	50	36				
4407	2	0	8	7	3	1	5	5	4407			
4408	0	0	0	0	2	0	1	0	4408			
GMU 1D	2	0	8	7	5	1	6	5				
4503	5	9	8	14	3	4	2	2	4503			
4503									4508			
4504	0	1	0	0	0	1	3	0	4504			
4505	0	8	5	0	0	0	0	0	4505			
4506	0	0	0	0	0	0	0	0	4506			
4607	0	2	0	3	1	2	0	0	4607			
GMU 5A	5	20	13	17	4	7	5	2				
Unknown	6	10	3	2	0	0	1	1				
G.Total	144	239	239	221	180	167	196	140				

Table L-9
Number of Mountain Goat Hunters (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	1990 WAA#	1988	1989	1990
405	0	0	0	0	0	0	0	1	405			
612	0	0	0	4	0	0	0	0	612			
613	0	0	0	1	2	2	3	3	613			
614	0	0	3	2	1	2	1	4	614			
715	29	36	40	29	26	20	10	23	715			
700	16	0	0	0	0	0	0	0				
716	4	11	11	5	8	6	8	0	716			
717	25	33	25	18	27	22	22	7	717			
718	0	0	0	0	0	3	0	0	718			
719	1	39	56	56	56	45	62	28	719			
819	33	0	0	0	0	0	0	0				
820	5	7	1	6	2	7	4	4	820			
821	1	2	4	3	1	6	4	2	821			
822	12	14	8	14	9	21	3	11	822			
823	1	1	4	7	1	1	1	2	823			
824	0	0	2	0	0	0	3	0	824			
825	0	0	0	0	0	0	0	0	825			
826	1	1	0	2	4	0	0	0	826			
GMU 1A	128	144	154	147	137	135	121	85				
1601	0	1	2	0	0	0	0	0	1601			
1602	0	1	5	2	1	0	0	0	1602			
1603	0	7	18	12	19	12	21	16	1603			
1604	0	0	0	0	0	0	0	0	1604			
1605	0	9	8	8	6	5	0	13	1605			
1706	0	33	23	44	26	55	52	0	1706			
1707	0	8	11	8	6	0	4	9	1707			
1708	0	10	11	9	10	11	14	19	1708			
1810	0	0	0	1	0	1	0	0	1810			
1811	0	2	2	2	3	12	5	3	1811			
1812	0	3	2	5	0	1	2	7	1812			
1813	0	10	0	1	0	0	10	8	1813			
1814	0	0	0	1	0	0	4	0	1814			
1815	0	0	0	0	0	9	12	4	1815			
1816	0	0	0	0	0	2	0	2	1816			
1817	0	1	0	0	0	2	3	2	1817			
GMU 1B	0	85	82	93	71	110	127	83				
2202	2	0	0	0	0	0	0	1	2202			
2203	0	0	1	2	0	0	5	0	2203			
2304	0	1	0	0	0	0	0	1	2304			
2305	0	1	4	0	1	1	0	0	2305			
2306	1	1	2	7	2	1	0	0	2306			
2408	0	0	0	4	2	0	0	1	2408			
2409	1	8	10	4	5	2	2	1	2409			
2410	0	1	0	1	0	0	2	1	2410			
2411	3	0	1	0	0	0	0	5	2411			
2412	0	0	2	0	1	0	2	1	2412			
2413	0	3	0	0	5	2	0	2	2413			
2514	3	6	5	4	11	10	11	0	2514			
2515	9	12	13	0	0	2	3	0	2515			
2516	0	0	0	0	0	0	0	0	2516			
2517	21	15	20	0	0	0	0	0	2517			
2518	2	1	0	4	8	6	11	2	2518			
2519	1	0	1	0	0	0	0	0	2519			

Table L-9 (continued)
Number of Mountain Goat Hunters (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	1990 WAA#	1988	1989	1990
2800	0	0	0	0	0	2	0	0				
2823	2	4	6	0	0	0	0	0	2823			
2824	16	24	28	31	36	33	32	7	2824			
2825	12	4	15	31	8	16	5	5	2825			
2926	2	0	3	4	1	0	2	2	2926			
2927	2	1	1	4	1	3	8	2	2927			
GMU 1C	77	82	112	96	81	78	83	31				
3000	0	0	0	123	0	0	0	0				
3001	64	101	96	37	64	67	66	62	3001			
3001									3314			
3002	5	7	10	2	2	1	7	8	3002			
3003	63	96	102	25	51	52	55	46	3003			
3013	0	0	0	1	0	0	0	0				
3031	0	1	0	0	0	0	0	1				
3100	0	1	0	0	0	0	0	0				
3200	0	0	0	5	0	0	0	0				
3206	2	1	0	0	0	1	0	0	3206			
3207	5	3	3	1	5	9	2	3	3207			
3300	1	0	1	1	0	0	0	0				
3313	0	0	2	0	8	3	1	1	3313			
3315	2	2	4	1	1	4	0	1	3315			
3700	0	0	0	11	0	0	0	0				
3731	3	9	14	7	9	2	0	0	3731			
3732	0	0	0	0	0	0	0	0	3732			
3733	6	3	7	4	6	7	9	9	3733			
GMU 4	151	224	239	218	146	146	140	131				
4407	2	1	14	14	3	1	5	5	4407			
4408	0	0	1	0	2	0	1	0	4408			
GMU 1D	2	1	15	14	5	1	6	5				
4503	17	25	24	27	4	15	8	13	4503			
4503									4508			
4504	0	1	1	0	0	1	3	1	4504			
4505	4	14	10	1	0	0	0	0	4505			
4506	0	0	0	0	0	0	0	0	4506			
4607	3	5	0	4	1	2	0	0	4607			
GMU 5A	24	45	35	32	5	18	11	14				
Unknown	90	95	40	29	120	85	56	114				
G.Total	472	676	677	629	565	573	544	463				

Table L-10
Number of Mountain Goat Hunter-days (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
405	0	0	0	0	0	0	0	3	405			
612	0	0	0	13	0	0	0	0	612			
613	0	0	0	4	6	4	7	6	613			
614	0	0	6	6	2	9	2	9	614			
715	88	115	119	96	91	42	25	95	715			
700	45	0	0	0	0	0	0	0				
716	10	39	26	14	31	21	38	0	716			
717	60	100	85	62	93	72	88	41	717			
718	0	0	0	0	0	10	0	0	718			
719	3	124	159	175	187	161	176	81	719			
819	93	0	0	0	0	0	0	0				
820	11	18	2	15	5	32	10	9	820			
821	3	5	18	16	3	22	12	12	821			
822	31	35	18	45	21	65	4	43	822			
823	3	2	7	17	3	2	3	6	823			
824	0	0	5	0	0	0	7	0	824			
825	0	0	0	0	0	0	0	0	825			
826	1	2	0	6	19	0	0	0	826			
GMU 1A	348	440	445	469	461	440	372	305				
1601	0	0	2	0	0	0	0	0	1601			
1602	0	6	12	5	3	0	0	0	1602			
1603	0	28	38	29	63	39	50	47	1603			
1604	0	0	0	0	0	0	0	0	1604			
1605	0	18	14	28	8	8	0	23	1605			
1706	0	83	4	88	59	110	103	0	1706			
1707	0	18	14	20	11	0	8	18	1707			
1708	0	40	25	24	23	42	42	73	1708			
1810	0	0	0	2	0	1	0	0	1810			
1811	0	6	6	3	6	41	10	7	1811			
1812	0	4	2	12	0	3	4	28	1812			
1813	0	29	0	4	0	0	28	21	1813			
1814	0	0	0	3	0	0	13	0	1814			
1815	0	0	0	0	0	24	41	4	1815			
1816	0	0	0	0	0	11	0	6	1816			
1817	0	2	0	0	0	4	3	4	1817			
GMU 1B	0	234	117	218	173	283	302	231				
2202	3	0	0	0	0	0	0	5	2202			
2203	0	0	2	6	0	0	22	0	2203			
2304	0	6	0	0	0	0	0	2	2304			
2305	0	6	14	0	2	1	0	0	2305			
2306	2	6	4	28	7	2	0	0	2306			
2408	0	0	0	11	2	0	0	3	2408			
2409	1	13	29	12	7	7	4	3	2409			
2410	0	2	0	2	0	0	6	3	2410			
2411	7	0	3	0	0	0	0	7	2411			
2412	0	0	6	0	1	0	8	2	2412			
2413	0	9	0	0	13	6	0	8	2413			
2514	6	13	13	4	27	30	36	0	2514			
2515	13	22	23	0	0	4	5	0	2515			
2516	0	0	0	0	0	0	0	0	2516			
2517	39	21	47	0	0	0	0	0	2517			
2518	5	3	0	12	25	7	29	3	2518			
2519	2	0	2	0	0	0	0	0	2519			

Table L-10 (continued)
Number of Mountain Goat Hunter-days (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
2800	0	0	0	0	0	11	0	0				
2823	7	9	25	0	0	0	0	0	2823			
2824	52	61	68	78	98	59	72	19	2824			
2825	46	16	41	125	27	48	18	10	2825			
2926	4	0	8	12	4	0	4	6	2926			
2927	14	7	4	26	3	10	21	5	2927			
GMU 1C	201	194	289	316	216	185	225	76				
3000	0	0	0	290	0	0	0	0				
3001	167	273	261	80	168	216	143	168	3001			
3001									3314			
3002	9	14	19	3	5	4	11	18	3002			
3003	152	222	265	53	130	98	117	107	3003			
3013	0	0	0	1	0	0	0	0				
3031	0	1	0	0	0	0	0	7				
3100	0	1	0	0	0	0	0	0				
3200	0	0	0	21	0	0	0	0				
3206	5	4	0	0	0	3	0	0	3206			
3207	13	3	6	2	11	38	8	5	3207			
3300	4	0	4	1	0	0	0	0				
3313	0	0	3	0	16	5	3	5	3313			
3315	3	4	13	1	1	8	0	3	3315			
3700	0	0	0	25	0	0	0	0				
3731	16	22	63	14	13	3	0	0	3731			
3732	0	0	0	0	0	0	0	0	3732			
3733	19	17	24	7	7	11	25	33	3733			
GMU 4	388	561	658	498	351	386	307	346				
4407	5	1	22	35	3	2	6	15	4407			
4408	0	0	1	0	11	0	8	0	4408			
GMU 1D	5	1	23	35	14	2	14	15				
4503	86	94	96	75	12	34	30	80	4503			
4503									4508			
4504	0	6	10	0	0	4	10	1	4504			
4505	25	38	27	4	0	0	0	0	4505			
4506	0	0	0	0	0	0	0	0	4506			
4607	20	14	0	17	2	6	0	0	4607			
GMU 5A	131	152	133	96	14	44	40	81				
Unknown	354	266	89	49	303	202	107	281				
G.Total	1,427	1,848	1,790	1,681	1,532	1,542	1,367	1,335				

Table L-11

Estimated Changes in Brown Bear Habitat Capability (Number of Animals) due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
404	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
405	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
406	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
407	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
408	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
509	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
510	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
511	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
612	31	31	31	31	30	25	31	31	29	24	31	31	29	23	31	31	31	23	31	31	30	23
613	20	20	20	20	20	20	20	20	20	20	20	20	20	15	20	20	20	19	20	20	20	15
614	5	5	5	5	5	5	5	5	5	5	5	5	5	3	5	5	5	5	5	5	5	3
715	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
716	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
717	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
718	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
719	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
820	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
821	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
822	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
823	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
824	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
825	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
826	16	16	16	16	16	16	16	16	16	16	16	15	16	13	16	16	15	14	16	16	15	14
901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-11 (continued)

Estimated Changes in Brown Bear Habitat Capability (Number of Animals) due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1323	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1332	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1422	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1528	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1529	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1601	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1602	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1603	21	21	20	20	20	19	20	20	20	19	20	20	20	19	20	20	20	19	20	20	20	19
1604	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
1605	28	26	26	26	25	25	26	26	25	22	26	26	25	22	26	26	24	23	26	26	25	23
1706	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
1707	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
1708	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
1809	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
1810	22	22	21	20	19	18	21	21	19	18	21	21	19	16	21	21	20	18	21	21	20	17
1811	26	26	26	25	24	24	26	26	25	24	26	26	25	23	26	26	25	24	26	26	25	24
1812	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	30	30	30	29
1813	50	47	47	47	47	47	47	47	47	47	47	47	45	44	47	47	46	45	47	47	45	44
1814	24	24	24	24	23	23	24	23	23	23	24	24	23	23	24	24	23	22	24	24	23	23
1815	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1816	15	15	14	13	12	12	14	14	13	12	14	14	13	12	14	14	13	11	14	14	13	12
1817	28	28	28	28	27	23	28	28	27	23	28	28	26	19	28	28	28	23	28	28	26	20
1901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1910	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2202	9	9	9	9	9	9	8	8	8	8	7	7	7	7	9	9	9	9	7	7	7	7
2203	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23

Table L-11 (continued)

Estimated Changes in Brown Bear Habitat Capability (Number of Animals) due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	19	18	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	16	18	18	18	18
2305	30	30	29	29	26	25	29	29	27	25	28	28	26	24	29	29	26	26	29	29	25	24
2306	17	17	17	17	14	13	17	17	15	13	17	17	15	12	17	17	14	13	17	16	14	13
2408	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2409	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
2410	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2411	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
2412	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2413	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
2514	14	14	14	14	14	14	14	14	13	13	14	14	12	10	14	14	12	12	14	14	12	11
2515	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
2518	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
2519	32	32	32	32	32	31	32	32	32	31	32	32	32	30	32	32	30	30	32	32	31	31
2620	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2621	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	3	3	3	5	5	5	5
2722	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2823	94	94	87	87	86	86	87	87	87	86	80	80	80	80	80	79	79	78	80	80	80	80
2824	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	15	14	16	16	16	16
2825	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
2926	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2927	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3001	102	93	91	91	90	90	89	89	88	88	76	75	73	73	77	77	76	75	81	81	81	80
3002	76	70	68	68	68	68	67	67	67	67	66	66	66	66	66	66	66	66	68	68	68	68
3003	71	70	64	64	63	63	63	63	62	62	58	57	56	56	59	58	58	57	62	62	61	60
3104	75	68	68	68	66	66	67	67	65	65	58	55	53	53	58	58	57	57	60	59	57	56
3105	67	67	65	65	65	65	66	66	66	66	61	61	61	61	60	60	60	60	66	66	66	66
3206	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45	45	45	45	50	50	50	50
3207	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
3308	159	140	140	135	127	108	138	134	124	106	129	124	118	101	140	135	122	101	134	128	117	102
3309	57	57	57	57	56	51	56	55	54	51	54	52	51	51	57	56	55	50	52	52	51	51
3310	81	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
3311	70	69	69	69	69	69	64	63	62	62	62	60	58	58	59	58	56	56	61	60	58	58
3312	29	29	26	26	25	25	26	26	25	25	24	24	24	24	23	23	23	23	24	24	24	24
3313	108	93	83	82	75	73	83	82	74	72	76	74	73	69	81	79	71	68	81	78	73	70
3314	52	50	47	47	46	46	47	47	46	46	42	41	40	40	40	40	40	39	42	42	42	41
3315	62	60	52	51	47	47	51	49	47	47	53	51	48	47	51	50	43	43	52	50	48	47
3416	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
3417	144	144	144	144	144	144	144	144	144	144	143	143	143	143	144	144	144	144	144	144	144	144
3418	64	64	64	64	64	64	64	64	64	64	60	60	60	60	64	64	64	64	64	64	64	64
3419	83	83	83	83	83	83	83	83	83	83	82	82	82	82	83	83	83	83	83	83	83	83

Table L-11 (continued)

Estimated Changes in Brown Bear Habitat Capability (Number of Animals) due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
3421	49	49	48	48	48	48	49	49	49	49	47	47	47	47	49	49	49	49	49	49	49	49
3523	74	73	72	72	72	72	73	72	70	69	71	69	66	64	72	69	64	58	68	65	61	57
3524	20	20	20	20	18	17	20	20	18	17	20	19	17	15	20	20	18	17	18	18	17	15
3525	99	93	93	92	84	75	96	92	85	72	95	89	78	66	93	90	80	66	84	79	75	65
3526	56	52	50	50	48	48	50	49	46	45	46	44	43	42	50	47	43	39	47	44	40	37
3551	75	73	73	73	63	54	73	72	62	54	73	72	57	45	73	73	55	45	65	63	55	44
3627	41	38	38	36	34	29	37	36	34	29	34	33	32	28	37	36	33	28	36	34	32	28
3628	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
3629	134	131	131	130	129	122	129	128	126	118	125	124	121	121	131	129	124	110	115	113	107	105
3630	72	72	72	72	72	72	71	71	70	69	69	67	66	65	69	67	64	61	72	69	67	65
3731	101	99	96	95	94	94	95	95	94	94	95	93	91	91	93	92	88	88	97	96	95	95
3732	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
3733	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190	190
3734	141	141	141	141	141	141	141	141	141	141	141	141	141	141	132	132	132	132	141	141	141	141
3835	44	44	44	44	43	38	43	42	41	37	44	44	38	34	43	42	40	38	39	39	36	32
3836	76	76	76	75	75	75	75	75	75	74	77	76	67	59	75	71	66	60	68	68	64	58
3837	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
3938	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111
3939	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
3940	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
4041	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
4042	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
4043	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145	145
4044	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
4054	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
4055	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
4145	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
4146	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
4147	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
4148	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
4149	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
4150	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
4222	110	109	109	109	109	109	111	108	104	99	110	106	100	96	108	106	103	98	104	103	100	97
4252	28	28	28	28	28	28	28	27	25	23	28	26	23	22	28	26	24	22	26	25	24	23
4253	66	62	62	62	62	62	63	61	57	53	62	59	55	53	62	58	55	50	60	58	56	54
4256	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
4302	8	7	7	7	7	7	7	7	7	7	6	6	6	6	7	7	7	7	6	6	6	6
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
4408	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
4503	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62

Table L-11 (continued)
Estimated Changes in Brown Bear Habitat Capability (Number of Animals) due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4505	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
4506	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
4508	71	70	70	70	69	69	69	68	67	66	69	69	68	62	68	68	67	64	69	69	69	63
4607	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
5012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5018	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-12

Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
406	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
612	100	100	100	97	81	100	100	94	77	100	100	94	74	100	100	100	74	100	100	97	74
613	100	100	100	100	100	100	100	100	100	100	100	100	75	100	100	100	95	100	100	100	75
614	100	100	100	100	100	100	100	100	100	100	100	100	60	100	100	100	100	100	100	100	60
715	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	100	94	100	81	100	100	94	88	100	100	94	88
901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1317	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-12 (continued)

Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1323	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1603	100	95	95	95	90	95	95	95	90	95	95	95	90	95	95	95	90	95	95	95	90
1604	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1605	93	93	93	89	89	93	93	89	79	93	93	89	79	93	93	86	82	93	93	89	82
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	95	91	86	82	95	95	86	82	95	95	86	73	95	95	91	82	95	95	91	77
1811	100	100	96	92	92	100	100	96	92	100	100	96	88	100	100	96	92	100	100	96	92
1812	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	97	100	100	100	97
1813	94	94	94	94	94	94	94	94	94	94	94	90	88	94	94	92	90	94	94	90	88
1814	100	100	100	96	96	100	96	96	96	100	100	96	96	100	100	96	92	100	100	96	96
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	93	87	80	80	93	93	87	80	93	93	87	80	93	93	87	73	93	93	87	80
1817	100	100	100	96	82	100	100	96	82	100	100	93	68	100	100	100	82	100	100	93	71
1901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1905	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1906	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-12 (continued)

Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	100	100	100	100	100	89	89	89	89	78	78	78	78	100	100	100	100	78	78	78	78
2203	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
2304	95	95	95	95	95	95	95	95	95	95	95	95	95	89	89	89	84	95	95	95	95
2305	100	97	97	87	83	97	97	90	83	93	93	87	80	97	97	87	87	97	97	83	80
2306	100	100	100	82	76	100	100	88	76	100	100	88	71	100	100	82	76	100	94	82	76
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	100	93	93	100	100	86	71	100	100	86	86	100	100	86	79
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	100	97	100	100	100	97	100	100	100	94	100	100	94	94	100	100	97	97
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	60	60	60	60	100	100	100	100
2722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2823	100	93	93	91	91	93	93	93	91	85	85	85	85	85	84	84	83	85	85	85	85
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94	94	88	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3001	91	89	89	88	88	87	87	86	86	75	74	72	72	75	75	75	74	79	79	79	78
3002	92	89	89	89	89	88	88	88	88	87	87	87	87	87	87	87	87	89	89	89	89
3003	99	90	90	89	89	89	89	87	87	82	80	79	79	83	82	82	80	87	87	86	85
3104	91	91	91	88	88	89	89	87	87	77	73	71	71	77	77	76	76	80	79	76	75
3105	100	97	97	97	97	99	99	99	99	91	91	91	91	90	90	90	90	99	99	99	99
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	90	90	90	90	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	88	88	85	80	68	87	84	78	67	81	78	74	64	88	85	77	64	84	81	74	64
3309	100	100	100	98	89	98	96	95	89	95	91	89	89	100	98	96	88	91	91	89	89
3310	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
3311	99	99	99	99	99	91	90	89	89	89	86	83	83	84	83	80	80	87	86	83	83
3312	100	90	90	86	86	90	90	86	86	83	83	83	83	79	79	79	79	83	83	83	83
3313	86	77	76	69	68	77	76	69	67	70	69	68	64	75	73	66	63	75	72	68	65
3314	96	90	90	88	88	90	90	88	88	81	79	77	77	77	77	77	75	81	81	81	79
3315	97	84	82	76	76	82	79	76	76	85	82	77	76	82	81	69	69	84	81	77	76
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-12 (continued)

Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability

(1954 = 100 Percent) (a "-" means brown bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	94	94	94	94	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	98	98	98	98	100	100	100	100	96	96	96	96	100	100	100	100	100	100	100	100
3523	99	97	97	97	97	99	97	95	93	96	93	89	86	97	93	86	78	92	88	82	77
3524	100	100	100	90	85	100	100	90	85	100	95	85	75	100	100	90	85	90	90	85	75
3525	94	94	93	85	76	97	93	86	73	96	90	79	67	94	91	81	67	85	80	76	66
3526	93	89	89	86	86	89	88	82	80	82	79	77	75	89	84	77	70	84	79	71	66
3551	97	97	97	84	72	97	96	83	72	97	96	76	60	97	97	73	60	87	84	73	59
3627	93	93	88	83	71	90	88	83	71	83	80	78	68	90	88	80	68	88	83	78	68
3628	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3629	98	98	97	96	91	96	96	94	88	93	93	90	90	98	96	93	82	86	84	80	78
3630	100	100	100	100	100	99	99	97	96	96	93	92	90	96	93	89	85	100	96	93	90
3731	98	95	94	93	93	94	94	93	93	94	92	90	90	92	91	87	87	96	95	94	94
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	94	94	94	94	100	100	100	100
3835	100	100	100	98	86	98	95	93	84	100	100	86	77	98	95	91	86	89	89	82	73
3836	100	100	99	99	99	99	99	99	97	101	100	88	78	99	93	87	79	89	89	84	76
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	99	99	99	99	99	101	98	95	90	100	96	91	87	98	96	94	89	95	94	91	88
4252	100	100	100	100	100	100	96	89	82	100	93	82	79	100	93	86	79	93	89	86	82
4253	94	94	94	94	94	95	92	86	80	94	89	83	80	94	88	83	76	91	88	85	82
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	88	88	88	88	88	88	88	88	88	75	75	75	75	88	88	88	88	75	75	75	75

Table L-12 (continued)

Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	99	99	99	97	97	97	96	94	93	97	97	96	87	96	96	94	90	97	97	97	89
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-13
Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means brown bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
101	-	-	-	-	-	-	-	-	-	-	-	-	-
303	-	-	-	-	-	-	-	-	-	-	-	-	-
404	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-
406	-	-	-	-	-	-	-	-	-	-	-	-	-
407	-	-	-	-	-	-	-	-	-	-	-	-	-
408	-	-	-	-	-	-	-	-	-	-	-	-	-
509	-	-	-	-	-	-	-	-	-	-	-	-	-
510	-	-	-	-	-	-	-	-	-	-	-	-	-
511	-	-	-	-	-	-	-	-	-	-	-	-	-
612	31	31	18	17	14	15	14	100	56	53	46	48	47
613	20	20	19	19	9	17	10	98	93	93	46	86	49
614	5	5	4	4	2	4	2	97	85	85	36	84	37
715	39	39	39	39	39	39	39	99	99	99	99	99	99
716	96	96	96	96	96	96	96	100	100	100	100	100	100
717	44	44	44	44	44	44	44	100	100	100	100	100	100
718	52	52	52	52	52	52	52	100	100	100	100	100	100
719	62	62	62	62	62	62	62	99	99	99	99	99	99
820	38	38	38	38	38	38	38	99	99	99	99	99	99
821	44	44	44	44	44	44	44	99	100	100	100	100	100
822	138	138	138	138	138	138	138	100	100	100	100	100	100
823	77	77	77	77	77	77	77	100	100	100	100	100	100
824	39	39	39	39	39	39	39	100	100	100	100	100	100
825	55	55	55	55	55	53	55	100	100	100	100	97	100
826	13	12	12	13	4	6	5	74	78	79	27	40	29
901	-	-	-	-	-	-	-	-	-	-	-	-	-
902	-	-	-	-	-	-	-	-	-	-	-	-	-
1003	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-
1209	-	-	-	-	-	-	-	-	-	-	-	-	-
1210	-	-	-	-	-	-	-	-	-	-	-	-	-
1211	-	-	-	-	-	-	-	-	-	-	-	-	-
1212	-	-	-	-	-	-	-	-	-	-	-	-	-
1213	-	-	-	-	-	-	-	-	-	-	-	-	-
1214	-	-	-	-	-	-	-	-	-	-	-	-	-
1315	-	-	-	-	-	-	-	-	-	-	-	-	-
1316	-	-	-	-	-	-	-	-	-	-	-	-	-
1317	-	-	-	-	-	-	-	-	-	-	-	-	-
1318	-	-	-	-	-	-	-	-	-	-	-	-	-
1319	-	-	-	-	-	-	-	-	-	-	-	-	-
1323	-	-	-	-	-	-	-	-	-	-	-	-	-
1332	-	-	-	-	-	-	-	-	-	-	-	-	-
1420	-	-	-	-	-	-	-	-	-	-	-	-	-
1421	-	-	-	-	-	-	-	-	-	-	-	-	-
1422	-	-	-	-	-	-	-	-	-	-	-	-	-
1524	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	-	-	-	-	-	-	-	-	-	-	-	-	-
1526	-	-	-	-	-	-	-	-	-	-	-	-	-
1527	-	-	-	-	-	-	-	-	-	-	-	-	-
1528	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-13 (continued)
Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means brown bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
1529	-	-	-	-	-	-	-	-	-	-	-	-	-
1530	-	-	-	-	-	-	-	-	-	-	-	-	-
1531	-	-	-	-	-	-	-	-	-	-	-	-	-
1601	-	-	-	-	-	-	-	-	-	-	-	-	-
1602	-	-	-	-	-	-	-	-	-	-	-	-	-
1603	21	20	17	17	15	17	17	97	83	80	71	81	81
1604	9	9	9	9	9	9	9	100	100	100	100	100	100
1605	28	25	23	18	19	20	20	89	84	66	67	70	70
1706	11	11	11	11	11	11	11	100	100	100	100	100	100
1707	19	18	18	18	18	18	18	96	96	96	96	96	96
1708	47	46	46	46	46	46	46	99	99	99	99	99	99
1809	21	21	21	21	21	21	21	100	100	100	100	100	100
1810	22	22	15	14	10	13	10	99	68	64	44	59	48
1811	26	26	23	23	17	23	22	100	88	87	67	87	86
1812	30	30	26	28	25	27	24	99	87	92	84	91	81
1813	50	45	47	47	33	41	37	91	94	94	66	82	74
1814	24	24	20	20	20	19	20	98	82	82	82	78	82
1815	17	16	17	17	17	17	17	96	97	97	97	97	97
1816	15	15	8	8	7	7	7	100	51	50	49	44	50
1817	22	22	14	14	9	14	10	79	52	52	33	51	36
1901	-	-	-	-	-	-	-	-	-	-	-	-	-
1902	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	-	-	-	-	-	-	-	-	-	-	-	-	-
1904	-	-	-	-	-	-	-	-	-	-	-	-	-
1905	-	-	-	-	-	-	-	-	-	-	-	-	-
1906	-	-	-	-	-	-	-	-	-	-	-	-	-
1910	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-
2202	9	9	9	6	4	9	4	100	100	68	48	100	50
2203	24	23	23	23	23	23	23	95	96	96	94	96	94
2304	19	18	17	17	17	15	17	94	91	91	90	79	90
2305	30	30	16	16	15	17	15	99	53	53	49	58	49
2306	17	16	8	8	7	8	8	94	48	48	43	48	47
2408	8	8	8	8	8	8	8	100	100	100	100	100	100
2409	7	7	7	7	7	7	7	100	100	100	100	100	100
2410	8	8	8	8	8	8	8	100	100	100	100	100	100
2411	24	24	24	24	24	24	24	100	100	100	100	100	100
2412	8	8	8	8	8	8	8	100	100	100	100	100	100
2413	20	20	20	20	20	20	20	100	100	100	100	100	100
2514	14	14	14	9	5	9	6	99	99	67	36	61	40
2515	18	17	18	18	18	17	18	97	98	99	99	97	99
2516	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	16	16	14	14	14	13	14	92	79	79	79	78	79
2518	37	37	37	37	37	37	37	100	100	100	100	100	100
2519	32	32	29	29	28	28	29	99	91	91	88	88	91
2620	3	3	3	3	3	3	3	99	100	100	100	88	100
2621	5	5	5	5	5	2	5	100	100	100	100	50	100
2722	-	-	-	-	-	-	-	-	-	-	-	-	-
2823	94	94	76	76	58	56	58	100	81	81	62	59	62
2824	16	16	16	16	16	14	16	100	100	100	100	87	100
2825	37	37	37	37	37	37	37	100	100	100	100	100	100
2926	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-13 (continued)
Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means brown bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
2927	-	-	-	-	-	-	-	-	-	-	-	-	-
3001	102	86	78	75	47	55	62	84	77	74	46	54	61
3002	63	53	34	33	28	32	53	70	45	44	36	42	70
3003	71	67	47	46	37	41	42	95	66	65	52	57	59
3104	75	59	58	57	34	41	39	79	78	76	45	55	52
3105	67	66	59	62	37	37	60	98	87	92	56	55	90
3206	50	49	50	50	50	33	50	97	99	99	99	66	99
3207	113	113	113	113	113	113	113	100	100	100	100	100	100
3308	159	119	71	69	62	62	63	75	44	43	39	39	39
3309	57	57	43	43	43	42	43	100	76	76	76	74	76
3310	81	75	78	78	78	78	78	92	96	96	96	96	96
3311	70	68	68	48	41	38	41	97	98	69	58	54	58
3312	29	28	18	18	15	14	15	97	61	61	53	48	53
3313	108	85	48	48	43	41	44	79	45	44	40	38	40
3314	52	47	36	36	25	23	26	91	68	68	48	45	50
3315	62	57	35	34	34	30	34	92	56	56	56	48	56
3416	67	67	67	67	67	67	67	100	100	100	100	100	100
3417	144	143	143	143	142	143	143	99	99	99	98	99	99
3418	64	63	63	63	53	63	63	99	99	99	83	99	99
3419	70	70	70	70	67	70	70	84	85	85	80	84	84
3420	57	57	57	57	57	57	57	100	100	100	100	100	100
3421	33	33	31	33	30	33	33	68	62	68	61	68	68
3523	74	63	71	63	52	31	25	86	96	85	70	42	33
3524	14	14	7	7	4	7	4	69	35	34	22	34	21
3525	99	73	53	48	32	38	28	74	53	49	32	38	28
3526	39	29	30	25	21	15	11	52	53	45	37	27	20
3551	75	58	33	33	19	21	19	77	43	43	25	28	25
3627	41	35	21	21	20	20	20	85	51	51	48	49	49
3628	51	50	51	51	51	51	51	97	100	100	100	100	100
3629	134	128	107	96	106	77	66	95	80	72	79	58	50
3630	72	72	71	52	41	37	41	100	99	72	57	51	56
3731	101	98	74	74	66	63	90	97	74	73	65	63	89
3732	52	52	52	52	52	52	52	99	99	99	99	99	99
3733	190	188	188	188	188	188	188	99	99	99	99	99	99
3734	126	126	126	126	126	81	126	89	89	89	89	57	89
3835	44	44	28	28	22	30	20	100	64	63	49	67	46
3836	76	73	72	71	44	49	43	97	95	93	58	65	56
3837	79	78	79	79	79	79	79	99	100	100	100	100	100
3938	111	110	110	110	110	110	110	99	99	99	99	99	99
3939	88	87	87	87	87	87	87	99	99	99	99	99	99
3940	86	84	86	86	86	86	86	98	100	100	100	100	100
4041	69	67	69	69	69	69	69	98	100	100	100	100	100
4042	52	52	52	52	52	52	52	75	75	75	75	75	75
4043	145	141	141	141	141	141	141	97	97	97	97	97	97
4044	98	96	96	96	96	96	96	98	98	98	98	98	98
4054	97	97	97	97	97	97	97	100	100	100	100	100	100
4055	90	89	90	90	90	90	90	99	100	100	100	100	100
4145	96	96	96	96	96	96	96	100	100	100	100	100	100
4146	94	94	94	94	94	94	94	100	100	100	100	100	100
4147	61	61	61	61	61	61	61	100	100	100	100	100	100
4148	48	47	48	48	48	48	48	97	100	100	100	100	100
4149	48	48	48	48	48	48	48	100	100	100	100	100	100
4150	32	32	32	32	32	32	32	100	100	100	100	100	100

Table L-13 (continued)
Estimated Changes in Brown Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means brown bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
4222	110	108	109	83	78	81	80	98	99	75	71	74	73
4252	28	28	28	15	13	13	15	100	100	53	47	47	52
4253	66	59	62	34	34	30	35	89	94	51	52	45	52
4256	27	27	27	27	27	27	27	100	100	100	100	100	100
4302	8	7	7	5	4	7	4	88	88	65	46	88	46
4304	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	7	7	7	7	7	7	7	78	78	78	78	77	78
4408	18	18	18	18	18	18	18	100	100	100	100	100	100
4503	62	61	62	62	62	62	62	99	99	99	99	99	99
4504	1	1	1	1	1	1	1	100	100	100	100	95	100
4505	55	55	55	55	55	55	55	100	100	100	100	100	100
4506	13	13	13	13	13	13	13	100	100	100	100	100	100
4508	70	67	66	61	56	59	57	94	93	86	80	83	81
4607	14	14	14	14	14	14	14	100	100	100	100	100	100
5012	-	-	-	-	-	-	-	-	-	-	-	-	-
5013	-	-	-	-	-	-	-	-	-	-	-	-	-
5014	-	-	-	-	-	-	-	-	-	-	-	-	-
5015	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	-	-	-	-	-	-	-	-	-	-	-	-	-
5017	-	-	-	-	-	-	-	-	-	-	-	-	-
5018	-	-	-	-	-	-	-	-	-	-	-	-	-
5130	-	-	-	-	-	-	-	-	-	-	-	-	-
5131	-	-	-	-	-	-	-	-	-	-	-	-	-
5132	-	-	-	-	-	-	-	-	-	-	-	-	-
5133	-	-	-	-	-	-	-	-	-	-	-	-	-
5134	-	-	-	-	-	-	-	-	-	-	-	-	-
5135	-	-	-	-	-	-	-	-	-	-	-	-	-
5136	-	-	-	-	-	-	-	-	-	-	-	-	-
5137	-	-	-	-	-	-	-	-	-	-	-	-	-
5138	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-14
Number of Brown Bear Harvested (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
406	0	0	0	0	0	0	0	0	406	0	1	
612	0	0	0	0	0	0	0	0	612	1	0	
715	0	0	0	1	0	0	0	2	715	0	0	
716	0	1	1	5	2	1	1	0	716	0	2	
717	0	0	0	0	1	0	1	2	717	0	0	
719	0	0	0	0	0	0	0	0	719	1	2	
820	0	0	0	1	0	0	0	0	820	1	0	
821	0	0	0	0	0	0	0	0	821	0	1	
822	1	0	0	0	0	0	0	1	822	0	1	
823	0	0	1	0	0	0	0	0	823	0	0	
824	0	0	0	0	0	0	0	0	824	0	0	
825	0	0	0	0	0	0	0	0	825	1	0	
826	0	0	0	0	0	0	0	0	826	0	0	
GMU 1A	1	1	2	7	3	1	2	5		4	7	
1708	0	1	0	0	0	2	2	1	1708	0	0	
1811	0	1	2	1	0	0	0	1	1811	0	0	
1812	1	0	0	0	1	2	0	0	1812	0	0	
1813	0	2	1	0	3	0	1	0	1813	2	1	
1814	1	1	0	1	0	0	2	0	1814	0	0	
1815	0	0	0	0	0	1	0	0	1815	1	0	
1817	0	0	0	0	0	0	0	2	1817	0	0	
GMU 1B	2	5	3	2	4	5	5	4		3	1	
1903	0	0	0	2	0	0	0	0	1903	0	0	
GMU 3	0	0	0	2	0	0	0	0		0	0	
2202	0	0	0	0	0	0	1	0	2202	0	0	
2203	0	0	0	0	0	0	2	0	2203	0	0	
2408	0	0	0	0	0	1	0	0	2408	0	0	
2409	0	0	1	1	0	1	0	1	2409	0	0	
2410	0	0	0	0	0	2	0	0	2410	0	1	
2411	1	0	1	0	1	0	0	1	2411	1	0	
2514	1	0	1	0	1	0	1	0	2514	0	0	
2515	0	0	0	0	1	0	0	0	2515	0	1	
2518	0	0	0	1	1	0	0	1	2518	0	0	
2823	1	1	1	2	1	2	2	0	2823	1	2	
2825	0	0	2	0	0	0	0	0	2825	0	0	
GMU 1C	3	1	6	4	5	6	6	3		2	4	
3001	4	0	1	3	4	2	0	5	3001	4	0	
3001									3314	0	1	
3002	0	0	0	0	0	0	0	0	3002	1	1	
3003	5	2	3	0	2	1	0	1	3003	1	1	
3104	1	1	0	0	0	0	1	1	3104	0	0	
3105	0	0	0	0	1	0	1	0	3105	0	0	
3206	1	0	0	0	1	0	0	0	3206	0	0	
3207	0	0	0	0	1	2	0	0	3207	0	0	
3308	1	5	4	4	4	2	4	4	3308	1	3	
3309	0	0	1	2	0	2	3	0	3309	2	1	
3310	1	1	1	1	0	0	0	2	3310	4	2	
3311	2	2	1	3	4	1	3	2	3311	5	1	
3312	0	0	2	0	0	0	0	0	3312	0	0	
3313	3	0	0	3	6	3	2	3	3313	5	3	
3315	1	0	0	0	2	3	1	2	3315	1	2	

Table L-14 (continued)
Number of Brown Bear Harvested (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
3400	0	1	0	0	1	0	0	0	3400	0	0	
3416	3	1	2	3	1	4	6	3	3416	1	3	
3417	3	2	0	1	3	4	5	3	3417	0	4	
3418	0	0	0	0	0	0	2	0	3418	2	0	
3419	0	0	0	0	0	2	2	0	3419	2	0	
3419									3421	0	0	
3420	0	0	1	1	2	0	1	2	3420	2	3	
3500	1	0	0	0	0	0	0	0		0	0	
3521	0	0	0	0	0	0	0	0	4256	0	0	
3522	4	1	1	2	2	4	0	0	4222	1	1	
3523	2	4	6	5	2	10	4	8	3523	1	2	
3524	2	2	0	1	1	4	5	5	3524	5	0	
3523									4252	0	2	
3523									4253	2	4	
3600	1	0	2	0	3	0	0	0				
3625	3	2	0	0	3	0	4	8	3525	4	0	
3625									3551	2	0	
3626	1	0	0	0	0	2	0	2	3526	1	1	
3627	1	0	0	1	0	1	0	1	3627	2	0	
3628	0	0	1	0	2	0	0	0	3628	0	2	
3629	1	4	2	3	6	1	7	3	3629	6	4	
3630	0	0	0	0	1	3	4	0	3630	1	3	
3731	3	4	1	2	3	7	2	4	3731	3	6	
3732	0	0	0	0	0	0	0	0	3732	0	0	
3733	2	3	2	5	4	2	2	7	3733	1	3	
3734	1	0	3	2	2	1	3	2	3734	4	2	
3835	0	0	0	2	2	0	2	1	3835	4	1	
3836	1	1	2	1	2	2	0	7	3836	4	1	
3837	0	0	0	0	0	0	0	0	3837	1	0	
3938	3	1	1	5	12	8	1	4	3938	8	6	
3939	3	1	4	6	5	2	5	8	3939	12	9	
3940	2	3	3	6	6	1	4	7	3940	5	8	
4041	0	12	5	9	13	7	12	10	4041	2	2	
4041									4055	6	3	
4042	0	0	1	1	3	0	0	0	4042	2	0	
4042									4054	0	0	
4043	0	0	0	1	0	0	0	1	4043	0	0	
4044	0	1	0	1	1	0	3	1	4044	2	1	
4145	2	0	1	1	1	1	3	0	4145	3	1	
4146	0	2	0	4	1	0	0	1	4146	0	0	
4147	5	0	0	0	0	1	1	3	4147	0	1	
4147									4150	1	1	
4148	2	4	0	1	2	4	2	1	4148	4	1	
4148									4149	1	0	
GMU 4	65	60	51	80	109	87	95	112		119	90	
4407	0	0	0	0	0	0	0	0	4407	0	0	
4408	0	1	0	0	0	0	0	0	4408	1	0	
GMU 1D	0	1	0	0	0	0	0	0		1	0	
4503	10	12	16	17	13	14	13	24	4503	7	4	
4503									4508	9	5	
4504	0	1	1	0	0	1	0	0	4504	0	1	
4505	6	3	3	6	3	0	2	3	4505	2	6	
4506	0	0	0	0	1	0	0	0	4506	0	1	

Table L-14 (continued)
Number of Brown Bear Harvested (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
4607	0	0	0	1	0	0	0	0	4607	0	0	
GMU 5A	16	16	20	24	17	15	15	27		18	17	
Unknown	1	0	0	0	1	0	0	0		0	0	
G.Total	88	84	82	119	139	114	123	151		147	119	

Table L-15
Number of Successful Brown Bear Hunter-days (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
406	0	0	0	0	0	0	0	0	406	0	2	
612	0	0	0	0	0	0	0	0	612	1	0	
715	0	0	0	1	0	0	0	4	715	0	0	
716	0	7	7	18	7	6	10	0	716	0	10	
717	0	0	0	0	3	0	3	5	717	0	0	
719	0	0	0	0	0	0	0	0	719	1	8	
820	0	0	0	10	0	0	0	0	820	3	0	
821	0	0	0	0	0	0	0	0	821	0	4	
822	1	0	0	0	0	0	0	3	822	0	2	
823	0	0	1	0	0	0	0	0	823	0	0	
825	0	0	0	0	0	0	0	0	825	1	0	
GMU 1A	1	7	8	29	10	6	13	12		6	26	
1708	0	3	0	0	0	29	11	1	1708	0	0	
1811	0	4	3	6	0	0	0	4	1811	0	0	
1812	5	0	0	0	1	7	0	0	1812	0	0	
1813	0	1	3	0	16	0	6	0	1813	18	2	
1814	4	1	0	3	0	0	10	0	1814	0	0	
1815	0	0	0	0	0	3	0	0	1815	1	0	
1817	0	0	0	0	0	0	0	2	1817	0	0	
GMU 1B	9	9	6	9	17	39	27	7		19	2	
1903	0	0	0	6	0	0	0	0	1903	0	0	
GMU 3	0	0	0	6	0	0	0	0		0	0	
2202	0	0	0	0	0	0	1	0	2202	0	0	
2203	0	0	0	0	0	0	6	0	2203	0	0	
2408	0	0	0	0	0	1	0	0	2408	0	0	
2409	0	0	2	4	0	1	0	3	2409	0	0	
2410	0	0	0	0	0	6	0	0	2410	0	5	
2411	1	0	3	0	2	0	0	3	2411	2	0	
2514	1	0	1	0	1	0	1	0	2514	0	0	
2515	0	0	0	0	1	0	0	0	2515	0	1	
2518	0	0	0	2	4	0	0	1	2518	0	0	
2519	0	0	0	0	0	0	0	0	2519	0	0	
2823	2	2	7	5	3	7	4	0	2823	1	2	
2825	0	0	9	0	0	0	0	0	2825	0	0	
GMU 1C	4	2	22	11	11	15	12	7		3	8	
3001	16	0	8	5	18	3	0	7	3001	4	0	
3001									3314	0	1	
3002	0	0	0	0	0	0	0	0	3002	1	1	
3003	8	4	4	0	11	2	0	1	3003	4	1	
3104	2	4	0	0	0	0	2	3	3104	0	0	
3105	0	0	0	0	1	0	5	0	3105	0	0	
3206	1	0	0	0	1	0	0	0	3206	0	0	
3207	0	0	0	0	1	10	0	0	3207	0	0	
3308	5	16	14	26	17	9	14	19	3308	8	11	
3309	0	0	3	3	0	5	14	0	3309	15	2	
3310	8	3	1	2	0	0	0	3	3310	44	6	
3311	14	7	6	7	22	2	3	8	3311	34	7	
3312	0	0	9	0	0	0	0	0	3312	0	0	
3313	7	0	0	21	12	18	14	9	3313	23	7	
3315	10	0	0	0	11	15	3	5	3315	2	11	
3400	0	1	0	0	1	0	0	0	3400	0	0	

Table L-15 (continued)
Number of Successful Brown Bear Hunter-days (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
3416	20	2	9	28	2	15	42	18	3416	5	13	
3417	28	7	0	1	14	26	38	14	3417	0	23	
3418	0	0	0	0	0	0	9	0	3418	14	0	
3419	0	0	0	0	0	12	6	0	3419	2	0	
3419									3421	0	0	
3420	0	0	1	8	3	0	4	4	3420	12	6	
3500	5	0	0	0	0	0	0	0		0	0	
3521	0	0	0	0	0	0	0	0	4256	0	0	
3522	15	1	8	4	9	11	0	0	4222	2	7	
3523	11	22	56	34	15	20	25	31	3523	6	3	
3524	14	3	0	11	6	20	20	16	3524	17	0	
3523									4252	0	15	
3523									4253	11	16	
3600	7	0	10	0	17	0	0	0		0	0	
3625	14	14	0	0	20	0	15	50	3525	20	0	
3625									3551	7	0	
3626	7	0	0	0	0	12	0	6	3526	6	1	
3627	1	0	0	5	0	8	0	5	3627	8	0	
3628	0	0	4	0	4	0	0	0	3628	0	6	
3629	4	24	12	11	26	5	19	5	3629	17	15	
3630	0	0	0	0	4	10	13	0	3630	4	19	
3731	12	15	6	8	12	30	12	26	3731	11	22	
3732	0	0	0	0	0	0	0	0	3732	0	0	
3733	13	16	12	7	25	6	10	30	3733	1	13	
3734	2	0	19	4	7	6	20	4	3734	7	9	
3835	0	0	0	4	2	0	2	1	3835	10	3	
3836	2	1	9	2	8	12	0	21	3836	7	2	
3837	0	0	0	0	0	0	0	0	3837	1	0	
3938	18	4	4	33	61	18	1	23	3938	39	50	
3939	14	9	19	25	23	9	22	37	3939	56	54	
3940	14	18	9	34	17	5	23	39	3940	24	55	
4041	0	69	28	56	67	46	63	52	4041	3	7	
4041									4055	37	15	
4042	0	0	7	2	21	0	0	0	4042	5	0	
4042									4054	0	0	
4043	0	0	0	1	0	0	0	1	4043	0	0	
4044	0	1	0	1	2	0	5	1	4044	3	6	
4145	7	0	2	1	2	3	6	0	4145	4	13	
4146	0	13	0	12	6	0	0	3	4146	0	0	
4147	38	0	0	0	0	1	3	14	4147	0	5	
4147									4150	1	3	
4148	20	32	0	4	11	36	6	2	4148	21	2	
4148									4149	4	0	
GMU 4	337	286	260	360	479	375	419	458		500	430	
4407	0	0	0	0	0	0	0	0	4407	0	0	
4408	0	2	0	0	0	0	0	0	4408	2	0	
GMU 1D	0	2	0	0	0	0	0	0		2	0	
4503	49	46	71	115	76	85	87	121	4503	28	11	
4503									4508	24	22	
4504	0	6	10	0	0	7	0	0	4504	0	4	
4505	49	30	26	37	13	0	11	20	4505	7	21	
4506	0	0	0	0	6	0	0	0	4506	0	5	

Table L-15 (continued)
Number of Successful Brown Bear Hunter-days (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
4607	0	0	0	7	0	0	0	0	4607	0	0	
GMU 5A	98	82	107	159	95	92	98	141		59	63	
Unknown	3	0	0	0	10	0	0	0		0	0	
G.Total	452	388	403	574	622	527	569	625		589	529	

Table L-16

Estimated Changes in Black Bear Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	67	66	65	65	65	63	65	65	65	64	65	65	65	62	65	65	64	63	66	65	65	64
303	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
404	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287
405	92	90	90	90	87	72	90	89	87	72	89	87	86	69	89	87	84	65	89	88	85	69
406	211	205	205	204	196	161	203	201	193	155	204	197	192	139	203	197	188	132	204	199	192	141
407	73	73	73	73	72	70	74	74	73	59	74	73	71	52	73	72	70	54	74	74	71	53
408	27	27	27	27	26	25	27	27	27	25	27	27	27	25	26	26	26	23	27	27	27	25
509	118	117	113	112	110	98	115	114	113	100	117	114	112	93	114	113	109	94	116	115	111	91
510	271	252	250	242	226	198	254	241	233	198	253	239	227	168	253	235	222	167	254	243	227	175
511	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
612	122	121	121	121	121	91	121	121	121	91	121	121	120	80	121	121	121	83	121	121	120	81
613	80	78	78	78	78	76	78	78	78	76	78	78	77	54	78	78	78	72	78	78	77	55
614	23	23	23	23	23	19	23	23	23	19	23	23	23	14	23	23	23	19	23	23	22	13
715	157	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156
716	369	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368	368
717	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174
718	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
719	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238
820	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139
821	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
822	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560	560
823	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
824	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
825	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
826	53	53	53	53	53	53	53	53	53	53	53	51	49	42	53	51	50	45	53	53	51	46
901	66	66	66	65	56	48	67	66	56	46	67	66	47	41	67	65	46	44	67	65	52	46
902	187	187	187	187	186	185	187	187	186	185	187	186	185	181	186	186	184	182	187	187	187	187
1003	85	72	70	53	47	34	70	55	48	34	69	52	44	28	70	52	40	18	71	68	44	28
1105	176	175	161	161	157	136	172	172	172	168	146	145	119	118	143	140	118	114	149	147	125	122
1106	12	12	11	11	11	11	11	11	10	10	12	12	10	9	11	10	6	6	12	12	12	12
1107	238	236	236	235	222	222	235	233	213	215	233	230	183	176	233	230	183	184	234	231	203	208
1108	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137	137
1209	132	132	131	131	124	119	130	130	124	120	131	130	110	104	130	127	98	102	130	130	122	121
1210	141	141	140	139	127	121	140	140	125	113	140	139	116	111	139	136	99	93	140	139	116	111
1211	77	76	75	71	66	48	75	72	65	45	75	71	60	46	75	69	56	40	75	75	60	46
1212	58	58	57	57	53	54	57	57	53	53	56	56	49	49	57	57	57	57	57	56	50	51
1213	60	59	58	56	52	51	57	56	53	52	58	57	44	44	58	57	51	50	58	56	44	44
1214	126	122	122	119	104	99	122	118	104	98	127	122	89	91	123	118	88	83	127	121	90	91
1315	124	101	105	103	75	74	105	103	75	72	104	101	71	66	104	102	71	62	104	99	70	66
1316	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
1317	108	87	91	87	84	77	90	85	82	74	87	85	75	60	85	81	74	63	86	82	75	61
1318	94	94	94	94	74	65	94	94	77	63	94	94	83	57	94	92	87	58	94	92	76	55

Table L-16 (continued)

Estimated Changes in Black Bear Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	187	175	175	174	147	131	174	173	137	121	171	167	133	99	174	173	149	120	175	164	141	113
1323	62	62	62	61	55	53	62	62	56	52	62	61	58	51	61	60	58	47	62	61	56	51
1332	115	109	110	108	99	95	109	107	97	89	108	106	93	75	108	105	96	81	108	104	90	76
1420	82	65	64	63	46	44	64	63	46	42	64	62	42	37	64	63	47	37	63	58	42	38
1421	163	158	160	159	129	108	164	161	121	96	161	154	108	82	160	156	102	89	162	152	115	98
1422	221	206	201	191	167	140	207	190	157	117	201	175	152	110	202	182	137	100	212	200	152	109
1524	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
1525	79	55	55	38	33	24	55	38	34	24	54	36	31	22	54	35	30	16	56	49	33	22
1526	116	115	114	113	113	113	112	112	107	105	112	110	105	101	111	110	105	96	112	110	106	100
1527	77	74	71	71	62	53	73	72	62	52	72	71	60	44	71	71	60	35	71	65	63	43
1528	42	40	40	39	37	35	39	38	36	33	39	37	34	28	40	38	35	28	40	36	35	30
1529	128	121	120	109	100	78	119	107	96	69	120	108	89	64	121	114	99	65	119	102	90	63
1530	112	100	100	100	81	63	103	102	82	63	104	101	85	60	104	102	85	48	102	91	87	53
1531	69	60	59	56	45	35	61	57	46	37	60	53	42	31	57	51	34	19	62	58	44	35
1601	77	77	77	75	67	55	77	75	67	56	76	75	64	52	77	76	66	54	76	76	65	48
1602	109	109	109	109	109	109	109	109	109	109	109	109	109	109	108	108	98	90	109	109	102	95
1603	80	79	77	77	75	73	78	78	76	72	77	76	74	68	78	77	75	70	78	77	75	71
1604	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
1605	108	101	101	100	97	91	103	101	94	81	101	100	92	79	102	101	93	82	102	100	94	82
1706	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
1707	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
1708	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
1809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1810	83	83	83	81	73	69	83	81	72	67	83	83	74	61	83	83	75	68	83	83	75	61
1811	97	96	97	95	91	88	97	96	92	89	97	96	91	84	96	95	92	88	97	96	93	88
1812	118	118	118	116	115	113	117	116	115	114	117	117	113	109	118	117	115	112	116	115	112	109
1813	184	177	177	177	177	177	177	177	177	177	175	174	169	162	179	178	176	170	176	176	170	163
1814	97	97	96	95	91	89	95	95	92	89	97	97	93	89	96	96	92	88	97	95	93	89
1815	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
1816	61	61	56	54	49	48	56	56	53	47	55	55	52	46	54	54	51	44	55	54	52	47
1817	113	113	112	112	111	92	113	113	111	92	114	114	110	66	113	113	112	91	114	113	110	72
1901	223	222	211	201	189	180	210	196	186	182	208	200	179	157	207	202	178	147	207	197	183	160
1902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1903	216	214	214	213	193	172	214	211	190	168	214	208	181	150	214	206	182	153	214	211	183	154
1904	41	37	35	34	34	31	36	35	34	32	37	34	30	25	36	33	28	21	37	34	31	25
1905	210	205	208	203	186	132	208	202	169	135	208	198	168	136	207	195	163	129	208	201	168	136
1906	21	20	17	16	16	14	19	19	18	15	19	18	17	12	19	17	16	6	19	19	19	14
1910	166	166	164	163	162	161	164	163	162	161	164	163	161	158	164	163	160	155	164	163	161	158
2007	208	200	204	199	177	154	201	196	172	139	202	195	167	132	201	196	164	130	205	198	172	139
2008	19	19	19	19	19	19	18	18	16	12	18	18	15	11	18	17	15	11	19	18	16	12
2202	34	33	33	33	33	33	30	30	30	30	23	23	23	23	33	33	33	33	26	26	26	25
2203	89	88	88	88	88	88	88	88	88	88	87	87	87	87	88	88	88	88	87	87	87	87

Table L-16 (continued)

Estimated Changes in Black Bear Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	70	68	66	66	66	66	66	66	66	66	66	66	66	66	64	64	61	59	66	66	66	66
2305	106	106	97	96	90	79	97	96	90	79	94	94	89	76	98	98	92	83	94	94	85	75
2306	63	62	58	58	50	41	58	58	51	41	57	57	52	38	58	57	49	40	58	56	46	40
2408	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
2409	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
2410	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
2411	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
2412	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
2413	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
2514	54	54	54	54	54	54	54	54	51	48	54	54	48	36	54	54	51	48	54	54	48	40
2515	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	71	71	72	72	72	72
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	59	59	59	59	58	56	59	59	57	55	59	59	58	55	58	58	57	54	59	59	58	56
2518	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
2519	106	106	108	108	105	99	107	106	104	98	107	107	104	98	106	106	103	97	106	106	103	98
2620	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2722	53	53	52	52	52	52	52	52	52	52	53	53	52	52	53	53	52	52	53	53	53	52
2823	322	322	288	288	287	286	289	288	287	285	255	255	255	255	253	252	250	246	255	255	255	255
2824	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	50	45	52	52	52	52
2825	117	117	117	117	117	117	117	117	117	117	117	117	117	117	116	116	116	116	117	117	117	117
2926	215	215	216	216	206	202	209	209	193	171	189	189	175	166	218	218	202	155	187	182	169	156
2927	193	193	193	191	183	176	193	192	184	179	173	166	138	133	192	192	182	178	176	170	141	125
3001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3309	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-16 (continued)

Estimated Changes in Black Bear Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3523	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3551	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3627	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3628	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3629	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4042	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4252	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4302	8	7	7	7	7	7	7	7	7	7	5	5	5	5	7	7	7	7	5	5	5	5
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
4408	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
4503	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114

Table L-16 (continued)

Estimated Changes in Black Bear Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4505	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
4506	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
4508	175	174	175	175	170	169	172	169	161	158	171	171	165	136	171	163	157	147	172	172	168	142
4607	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
5012	270	261	265	253	219	160	264	244	218	160	258	228	200	138	258	229	207	145	257	229	210	160
5013	114	114	113	112	106	102	114	113	105	105	113	111	101	101	113	108	86	72	112	110	101	99
5014	75	74	74	70	58	51	74	73	58	57	72	70	56	55	73	72	53	51	72	69	55	53
5015	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
5016	129	128	128	128	127	127	128	128	128	128	128	128	128	128	128	128	127	127	128	128	128	128
5017	224	224	224	224	224	224	224	224	213	191	223	223	211	186	222	220	204	175	223	223	223	223
5018	86	85	85	83	78	75	84	84	77	76	84	84	78	78	84	83	72	65	84	83	78	77
5130	161	161	159	157	151	138	158	157	152	136	156	155	149	131	156	154	144	121	157	154	149	131
5131	116	115	115	114	108	96	115	114	109	96	112	110	106	92	113	111	103	83	112	111	106	92
5132	62	59	61	60	55	44	61	59	54	41	58	57	53	40	60	57	53	40	58	57	53	40
5133	176	176	176	176	176	176	175	175	166	140	173	173	160	132	173	173	163	135	173	172	161	135
5134	166	161	161	157	150	141	158	158	151	136	157	157	152	134	157	157	150	129	157	157	150	134
5135	79	79	78	77	73	66	78	77	73	65	77	76	73	63	78	76	73	65	78	77	73	63
5136	105	104	104	103	92	73	104	101	92	73	102	99	92	68	104	99	92	69	103	101	92	68
5137	88	88	87	87	87	87	87	87	87	87	88	88	87	87	87	87	87	87	88	88	87	87
5138	109	108	107	106	100	80	108	107	97	71	107	106	95	69	107	107	96	69	108	105	95	69

Table L-17

Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means black bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	99	97	97	97	94	97	97	97	96	97	97	97	93	97	97	96	94	99	97	97	96
303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	98	98	98	95	78	98	97	95	78	97	95	93	75	97	95	91	71	97	96	92	75
406	97	97	97	93	76	96	95	91	73	97	93	91	66	96	93	89	63	97	94	91	67
407	100	100	100	99	96	101	101	100	81	101	100	97	71	100	99	96	74	101	101	97	73
408	100	100	100	96	93	100	100	100	93	100	100	100	93	96	96	96	85	100	100	100	93
509	99	96	95	93	83	97	97	96	85	99	97	95	79	97	96	92	80	98	97	94	77
510	93	92	89	83	73	94	89	86	73	93	88	84	62	93	87	82	62	94	90	84	65
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	99	99	99	99	75	99	99	99	75	99	99	98	66	99	99	99	68	99	99	98	66
613	98	98	98	98	95	98	98	98	95	98	98	96	68	98	98	98	90	98	98	96	69
614	100	100	100	100	83	100	100	100	83	100	100	100	61	100	100	100	83	100	100	96	57
715	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	100	96	92	79	100	96	94	85	100	100	96	87
901	100	100	98	85	73	102	100	85	70	102	100	71	62	102	98	70	67	102	98	79	70
902	100	100	100	99	99	100	100	99	99	100	99	99	97	99	99	98	97	100	100	100	100
1003	85	82	62	55	40	82	65	56	40	81	61	52	33	82	61	47	21	84	80	52	33
1105	99	91	91	89	77	98	98	98	95	83	82	68	67	81	80	67	65	85	84	71	69
1106	100	92	92	92	92	92	92	83	83	100	100	83	75	92	83	50	50	100	100	100	100
1107	99	99	99	93	93	99	98	89	90	98	97	77	74	98	97	77	77	98	97	85	87
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	99	99	94	90	98	98	94	91	99	98	83	79	98	96	74	77	98	98	92	92
1210	100	99	99	90	86	99	99	89	80	99	99	82	79	99	96	70	66	99	99	82	79
1211	99	97	92	86	62	97	94	84	58	97	92	78	60	97	90	73	52	97	97	78	60
1212	100	98	98	91	93	98	98	91	91	97	97	84	84	98	98	98	98	98	97	86	88
1213	98	97	93	87	85	95	93	88	87	97	95	73	73	97	95	85	83	97	93	73	73
1214	97	97	94	83	79	97	94	83	78	101	97	71	72	98	94	70	66	101	96	71	72
1315	81	85	83	60	60	85	83	60	58	84	81	57	53	84	82	57	50	84	80	56	53
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	81	84	81	78	71	83	79	76	69	81	79	69	56	79	75	69	58	80	76	69	56

Table L-17 (continued)

Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means black bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	100	100	100	79	69	100	100	82	67	100	100	88	61	100	98	93	62	100	98	81	59
1319	94	94	93	79	70	93	93	73	65	91	89	71	53	93	93	80	64	94	88	75	60
1323	100	100	98	89	85	100	100	90	84	100	98	94	82	98	97	94	76	100	98	90	82
1332	95	96	94	86	83	95	93	84	77	94	92	81	65	94	91	83	70	94	90	78	66
1420	79	78	77	56	54	78	77	56	51	78	76	51	45	78	77	57	45	77	71	51	46
1421	97	98	98	79	66	101	99	74	59	99	94	66	50	98	96	63	55	99	93	71	60
1422	93	91	86	76	63	94	86	71	53	91	79	69	50	91	82	62	45	96	90	69	49
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	70	70	48	42	30	70	48	43	30	68	46	39	28	68	44	38	20	71	62	42	28
1526	99	98	97	97	97	97	97	92	91	97	95	91	87	96	95	91	83	97	95	91	86
1527	96	92	92	81	69	95	94	81	68	94	92	78	57	92	92	78	45	92	84	82	56
1528	95	95	93	88	83	93	90	86	79	93	88	81	67	95	90	83	67	95	86	83	71
1529	95	94	85	78	61	93	84	75	54	94	84	70	50	95	89	77	51	93	80	70	49
1530	89	89	89	72	56	92	91	73	56	93	90	76	54	93	91	76	43	91	81	78	47
1531	87	86	81	65	51	88	83	67	54	87	77	61	45	83	74	49	28	90	84	64	51
1601	100	100	97	87	71	100	97	87	73	99	97	83	68	100	99	86	70	99	99	84	62
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	90	83	100	100	94	87
1603	99	96	96	94	91	98	98	95	90	96	95	93	85	98	96	94	88	98	96	94	89
1604	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1605	94	94	93	90	84	95	94	87	75	94	93	85	73	94	94	86	76	94	93	87	76
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1810	100	100	98	88	83	100	98	87	81	100	100	89	73	100	100	90	82	100	100	90	73
1811	99	100	98	94	91	100	99	95	92	100	99	94	87	99	98	95	91	100	99	96	91
1812	100	100	98	97	96	99	98	97	97	99	99	96	92	100	99	97	95	98	97	95	92
1813	96	96	96	96	96	96	96	96	96	95	95	92	88	97	97	96	92	96	96	92	89
1814	100	99	98	94	92	98	98	95	92	100	100	96	92	99	99	95	91	100	98	96	92
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	92	89	80	79	92	92	87	77	90	90	85	75	89	89	84	72	90	89	85	77
1817	100	99	99	98	81	100	100	98	81	101	101	97	58	100	100	99	81	101	100	97	64
1901	100	95	90	85	81	94	88	83	82	93	90	80	70	93	91	80	66	93	88	82	72
1902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	99	99	99	89	80	99	98	88	78	99	96	84	69	99	95	84	71	99	98	85	71
1904	90	85	83	83	76	88	85	83	78	90	83	73	61	88	80	68	51	90	83	76	61
1905	98	99	97	89	63	99	96	80	64	99	94	80	65	99	93	78	61	99	96	80	65
1906	95	81	76	76	67	90	90	86	71	90	86	81	57	90	81	76	29	90	90	90	67
1910	100	99	98	98	97	99	98	98	97	99	98	97	95	99	98	96	93	99	98	97	95
2007	96	98	96	85	74	97	94	83	67	97	94	80	63	97	94	79	63	99	95	83	67
2008	100	100	100	100	100	95	95	84	63	95	95	79	58	95	89	79	58	100	95	84	63

Table L-17 (continued)

Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means black bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	97	97	97	97	97	88	88	88	88	68	68	68	68	97	97	97	97	76	76	76	74
2203	99	99	99	99	99	99	99	99	99	98	98	98	98	99	99	99	99	98	98	98	98
2304	97	94	94	94	94	94	94	94	94	94	94	94	94	91	91	87	84	94	94	94	94
2305	100	92	91	85	75	92	91	85	75	89	89	84	72	92	92	87	78	89	89	80	71
2306	98	92	92	79	65	92	92	81	65	90	90	83	60	92	90	78	63	92	89	73	63
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	100	94	89	100	100	89	67	100	100	94	89	100	100	89	74
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	98	95	100	100	97	93	100	100	98	93	98	98	97	92	100	100	98	95
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	102	102	99	93	101	100	98	92	101	101	98	92	100	100	97	92	100	100	97	92
2620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2722	100	98	98	98	98	98	98	98	98	100	100	98	98	100	100	98	98	100	100	100	98
2823	100	89	89	89	89	90	89	89	89	79	79	79	79	79	78	78	76	79	79	79	79
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96	87	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100
2926	100	100	100	96	94	97	97	90	80	88	88	81	77	101	101	94	72	87	85	79	73
2927	100	100	99	95	91	100	99	95	93	90	86	72	69	99	99	94	92	91	88	73	65
3001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3314	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-17 (continued)

Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means black bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3418	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3627	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3731	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3732	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3733	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3734	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3836	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3837	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4041	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4302	88	88	88	88	88	88	88	88	88	63	63	63	63	88	88	88	88	63	63	63	63

Table L-17 (continued)

Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means black bears are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	99	100	100	97	97	98	97	92	90	98	98	94	78	98	93	90	84	98	98	96	81
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	97	98	94	81	59	98	90	81	59	96	84	74	51	96	85	77	54	95	85	78	59
5013	100	99	98	93	89	100	99	92	92	99	97	89	89	99	95	75	63	98	96	89	87
5014	99	99	93	77	68	99	97	77	76	96	93	75	73	97	96	71	68	96	92	73	71
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	99	99	99	98	98	99	99	99	99	99	99	99	99	99	99	98	98	99	99	99	99
5017	100	100	100	100	100	100	100	95	85	100	100	94	83	99	98	91	78	100	100	100	100
5018	99	99	97	91	87	98	98	90	88	98	98	91	91	98	97	84	76	98	97	91	90
5130	100	99	98	94	86	98	98	94	84	97	96	93	81	97	96	89	75	98	96	93	81
5131	99	99	98	93	83	99	98	94	83	97	95	91	79	97	96	89	72	97	96	91	79
5132	95	98	97	89	71	98	95	87	66	94	92	85	65	97	92	85	65	94	92	85	65
5133	100	100	100	100	100	99	99	94	80	98	98	91	75	98	98	93	77	98	98	91	77
5134	97	97	95	90	85	95	95	91	82	95	95	92	81	95	95	90	78	95	95	90	81
5135	100	99	97	92	84	99	97	92	82	97	96	92	80	99	96	92	82	99	97	92	80
5136	99	99	98	88	70	99	96	88	70	97	94	88	65	99	94	88	66	98	96	88	65
5137	100	99	99	99	99	99	99	99	99	100	100	99	99	99	99	99	99	100	100	99	99
5138	99	98	97	92	73	99	98	89	65	98	97	87	63	98	98	88	63	99	96	87	63

Table L-18
Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means black bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
101	67	66	61	63	60	62	63	98	92	93	90	92	93
303	-	-	-	-	-	-	-	-	-	-	-	-	-
404	287	285	285	285	285	285	285	99	99	99	99	99	99
405	92	88	64	63	60	54	60	95	69	69	66	58	66
406	211	200	146	135	115	108	117	95	69	64	54	51	56
407	73	71	68	51	43	46	44	97	93	70	59	63	61
408	15	15	13	13	13	12	13	54	49	49	49	45	49
509	118	113	90	92	83	85	81	96	76	78	70	72	69
510	271	237	179	176	140	139	147	87	66	65	51	51	54
511	80	80	80	80	80	80	80	100	100	100	100	100	100
612	122	121	77	77	65	68	66	99	63	63	53	56	54
613	80	77	73	73	44	69	45	97	92	92	55	86	57
614	23	23	18	18	11	17	10	99	76	76	49	76	46
715	157	155	155	155	155	155	155	99	99	99	99	99	99
716	369	368	368	368	368	368	368	100	100	100	100	100	100
717	174	174	174	174	174	174	174	100	100	100	100	100	100
718	184	184	184	184	184	184	184	100	100	100	100	100	100
719	238	237	237	237	237	237	237	100	100	100	100	100	100
820	139	138	139	139	139	139	139	100	100	100	100	100	100
821	184	183	184	184	184	184	184	100	100	100	100	100	100
822	560	559	559	559	559	559	559	100	100	100	100	100	100
823	319	319	319	319	319	319	319	100	100	100	100	100	100
824	150	150	150	150	150	150	150	100	100	100	100	100	100
825	188	188	188	188	188	185	188	100	100	100	100	99	100
826	39	38	39	39	25	28	27	72	73	73	47	53	51
901	66	65	44	41	34	36	40	99	66	61	51	55	60
902	187	187	183	183	179	174	187	100	98	98	96	93	100
1003	85	60	29	29	23	14	23	71	34	34	27	17	27
1105	176	174	127	166	100	97	106	99	72	94	57	55	60
1106	12	12	11	9	8	5	12	99	90	72	64	40	100
1107	238	229	210	199	149	158	192	96	88	84	63	67	81
1108	137	137	137	137	137	137	137	100	100	100	100	100	100
1209	132	132	114	115	89	82	116	100	86	87	67	62	88
1210	141	140	113	102	96	74	96	100	80	72	68	53	68
1211	77	73	41	38	38	32	38	95	53	49	49	42	49
1212	58	58	52	51	40	57	44	100	89	87	69	98	76
1213	60	59	47	49	36	45	36	98	78	81	60	75	60
1214	126	118	88	88	75	68	75	94	70	70	59	54	59
1315	94	68	47	46	41	39	41	55	38	37	33	31	33
1316	65	63	63	63	63	63	63	97	98	98	98	97	98
1317	86	64	52	50	38	41	39	60	48	46	35	38	36
1318	94	91	54	53	46	48	45	97	58	56	49	51	48
1319	164	144	99	89	69	89	82	77	53	48	37	48	44
1323	62	62	45	44	42	38	42	100	73	71	68	62	68
1332	115	106	87	77	61	69	62	92	76	67	53	60	54
1420	52	37	23	22	19	19	19	45	28	27	23	23	24
1421	163	143	93	79	65	71	81	88	57	49	40	43	50
1422	221	182	126	99	93	80	89	82	57	45	42	36	40
1524	19	19	19	19	19	19	19	100	100	100	100	100	100
1525	52	30	13	13	12	8	12	38	17	17	15	11	15
1526	116	113	112	101	96	91	95	97	97	87	83	78	82
1527	77	67	46	45	36	28	37	87	60	59	47	37	47
1528	42	38	33	31	25	25	27	92	79	73	59	59	64

Table L-18 (continued)
Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means black bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
1529	97	81	53	45	40	41	40	63	41	35	31	32	31
1530	83	66	38	38	36	28	32	59	34	34	32	25	29
1531	69	49	31	32	27	15	30	71	44	47	39	22	44
1601	77	77	48	48	42	47	39	100	62	63	55	60	50
1602	109	109	109	109	109	86	92	100	100	100	100	79	84
1603	80	78	70	68	61	66	67	97	87	85	76	83	84
1604	11	11	11	11	11	11	11	100	100	100	100	100	100
1605	108	99	88	74	73	76	76	92	82	69	68	70	70
1706	44	44	44	44	44	44	44	100	100	100	100	100	100
1707	75	74	74	74	74	74	74	98	98	98	98	98	98
1708	170	169	169	169	169	169	169	99	99	99	99	99	99
1809	-	-	-	-	-	-	-	-	-	-	-	-	-
1810	83	83	63	60	49	59	49	100	76	72	59	71	59
1811	97	96	86	86	74	85	85	99	88	89	76	88	88
1812	118	118	105	110	100	109	100	100	89	93	85	92	85
1813	184	174	177	177	142	163	150	94	96	96	77	89	81
1814	97	96	83	83	82	81	82	99	85	85	85	84	85
1815	71	70	70	70	70	70	70	98	99	99	99	99	99
1816	61	61	39	38	37	35	38	100	64	63	61	58	63
1817	82	82	60	60	39	59	43	73	53	53	35	53	38
1901	223	215	158	158	128	120	131	97	71	71	57	54	59
1902	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	199	184	135	129	111	115	114	85	63	60	51	53	53
1904	41	34	29	30	21	17	21	82	71	74	51	41	51
1905	210	181	107	110	110	103	110	86	51	52	52	49	52
1906	21	18	13	14	11	5	13	86	62	67	51	23	62
1910	166	165	157	156	153	149	153	99	94	94	92	90	92
2007	195	165	124	110	100	99	108	79	60	53	48	48	52
2008	19	18	18	10	9	9	10	96	96	51	46	47	51
2202	34	33	33	27	19	33	21	97	97	78	55	97	60
2203	89	88	88	88	86	88	86	99	99	99	97	99	97
2304	70	68	65	65	64	57	64	97	92	92	92	82	92
2305	106	106	65	65	61	69	61	100	61	61	58	65	57
2306	63	60	33	33	31	32	32	95	53	53	49	52	51
2408	26	26	26	26	26	26	26	100	100	100	100	100	100
2409	26	26	26	26	26	26	26	100	100	100	100	100	100
2410	27	27	27	27	27	27	27	100	100	100	100	100	100
2411	72	72	72	72	72	72	72	100	100	100	100	100	100
2412	22	22	22	22	22	22	22	100	100	100	100	100	100
2413	52	52	52	52	52	52	52	100	100	100	100	100	100
2514	54	54	54	43	30	43	33	100	100	81	56	80	62
2515	72	71	71	72	72	70	72	99	99	99	99	97	99
2516	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	56	56	50	49	49	48	50	94	85	84	84	82	85
2518	117	117	117	117	117	117	117	100	100	100	100	100	100
2519	106	106	96	95	95	94	95	100	91	90	90	89	90
2620	-	-	-	-	-	-	-	-	-	-	-	-	-
2621	-	-	-	-	-	-	-	-	-	-	-	-	-
2722	53	53	51	51	50	50	50	99	96	96	95	95	95
2823	322	322	269	268	220	211	220	100	83	83	68	66	68
2824	52	52	52	52	52	45	52	100	100	100	100	86	100
2825	117	117	117	117	117	116	117	100	100	100	100	99	100
2926	215	215	193	156	149	140	140	100	90	72	69	65	65

Table L-18 (continued)
Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means black bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
2927	193	193	171	174	117	173	110	100	89	90	60	89	57
3001	-	-	-	-	-	-	-	-	-	-	-	-	-
3002	-	-	-	-	-	-	-	-	-	-	-	-	-
3003	-	-	-	-	-	-	-	-	-	-	-	-	-
3104	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-
3206	-	-	-	-	-	-	-	-	-	-	-	-	-
3207	-	-	-	-	-	-	-	-	-	-	-	-	-
3308	-	-	-	-	-	-	-	-	-	-	-	-	-
3309	-	-	-	-	-	-	-	-	-	-	-	-	-
3310	-	-	-	-	-	-	-	-	-	-	-	-	-
3311	-	-	-	-	-	-	-	-	-	-	-	-	-
3312	-	-	-	-	-	-	-	-	-	-	-	-	-
3313	-	-	-	-	-	-	-	-	-	-	-	-	-
3314	-	-	-	-	-	-	-	-	-	-	-	-	-
3315	-	-	-	-	-	-	-	-	-	-	-	-	-
3416	-	-	-	-	-	-	-	-	-	-	-	-	-
3417	-	-	-	-	-	-	-	-	-	-	-	-	-
3418	-	-	-	-	-	-	-	-	-	-	-	-	-
3419	-	-	-	-	-	-	-	-	-	-	-	-	-
3420	-	-	-	-	-	-	-	-	-	-	-	-	-
3421	-	-	-	-	-	-	-	-	-	-	-	-	-
3523	-	-	-	-	-	-	-	-	-	-	-	-	-
3524	-	-	-	-	-	-	-	-	-	-	-	-	-
3525	-	-	-	-	-	-	-	-	-	-	-	-	-
3526	-	-	-	-	-	-	-	-	-	-	-	-	-
3551	-	-	-	-	-	-	-	-	-	-	-	-	-
3627	-	-	-	-	-	-	-	-	-	-	-	-	-
3628	-	-	-	-	-	-	-	-	-	-	-	-	-
3629	-	-	-	-	-	-	-	-	-	-	-	-	-
3630	-	-	-	-	-	-	-	-	-	-	-	-	-
3731	-	-	-	-	-	-	-	-	-	-	-	-	-
3732	-	-	-	-	-	-	-	-	-	-	-	-	-
3733	-	-	-	-	-	-	-	-	-	-	-	-	-
3734	-	-	-	-	-	-	-	-	-	-	-	-	-
3835	-	-	-	-	-	-	-	-	-	-	-	-	-
3836	-	-	-	-	-	-	-	-	-	-	-	-	-
3837	-	-	-	-	-	-	-	-	-	-	-	-	-
3938	-	-	-	-	-	-	-	-	-	-	-	-	-
3939	-	-	-	-	-	-	-	-	-	-	-	-	-
3940	-	-	-	-	-	-	-	-	-	-	-	-	-
4041	-	-	-	-	-	-	-	-	-	-	-	-	-
4042	-	-	-	-	-	-	-	-	-	-	-	-	-
4043	-	-	-	-	-	-	-	-	-	-	-	-	-
4044	-	-	-	-	-	-	-	-	-	-	-	-	-
4054	-	-	-	-	-	-	-	-	-	-	-	-	-
4055	-	-	-	-	-	-	-	-	-	-	-	-	-
4145	-	-	-	-	-	-	-	-	-	-	-	-	-
4146	-	-	-	-	-	-	-	-	-	-	-	-	-
4147	-	-	-	-	-	-	-	-	-	-	-	-	-
4148	-	-	-	-	-	-	-	-	-	-	-	-	-
4149	-	-	-	-	-	-	-	-	-	-	-	-	-
4150	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-18 (continued)
Estimated Changes in Black Bear Habitat Capability Due to Vegetative Changes Plus Effects of Towns, Cabins, Campgrounds, and Road Access (a "-" means black bears are not present in that WAA)

	Habitat Capability (No. of Animals)							Percent of 1954 Habitat Capability					
WAA#	1954	1990	A-15	B-15	C-15	D-15	P-15	1990	A-15	B-15	C-15	D-15	P-15
4222	-	-	-	-	-	-	-	-	-	-	-	-	-
4252	-	-	-	-	-	-	-	-	-	-	-	-	-
4253	-	-	-	-	-	-	-	-	-	-	-	-	-
4256	-	-	-	-	-	-	-	-	-	-	-	-	-
4302	8	7	7	6	4	7	4	88	88	76	50	88	50
4304	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	27	26	26	26	26	26	26	78	78	78	78	77	78
4408	66	66	66	66	66	66	66	100	100	100	100	100	100
4503	114	113	114	114	114	114	114	100	100	100	100	100	100
4504	2	2	2	2	2	2	2	100	100	100	100	97	100
4505	48	48	48	48	48	48	48	100	100	100	100	100	100
4506	44	44	44	44	44	44	44	100	100	100	100	100	100
4508	173	169	165	152	129	141	135	97	94	87	74	80	77
4607	10	10	10	10	10	10	10	100	100	100	100	100	100
5012	270	233	136	138	112	122	138	86	50	51	42	45	51
5013	114	110	95	97	92	58	90	96	83	85	80	51	79
5014	75	73	44	49	47	42	45	97	58	66	62	56	60
5015	33	33	33	33	33	33	33	100	100	100	100	100	100
5016	129	128	126	128	128	126	128	99	98	99	99	98	99
5017	224	224	224	176	169	157	223	100	100	79	76	70	100
5018	86	82	69	70	72	56	71	96	81	81	84	65	83
5130	161	159	123	119	112	101	112	99	76	74	69	63	69
5131	116	107	84	84	79	68	79	93	72	72	68	59	68
5132	62	55	37	33	33	33	33	88	59	54	53	53	53
5133	176	174	174	117	106	112	111	99	99	67	60	63	63
5134	166	157	119	111	109	103	109	95	72	67	65	62	66
5135	79	79	59	57	51	60	51	100	74	73	64	75	64
5136	105	97	61	61	55	57	55	93	58	58	53	55	53
5137	88	87	85	85	85	85	85	99	97	97	97	97	97
5138	109	99	69	58	56	56	56	91	64	53	51	51	51

Table L-19
Number of Black Bear Harvested (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
101	0	1	2	1	1	1	1	0	101	1	0	
404	2	0	6	7	3	2	6	9	404	3	3	
405	0	0	0	3	0	3	2	0	405	1	1	
406	2	4	6	10	11	19	20	19	406	12	2	
407	1	1	1	6	4	1	2	5	407	4	6	
408	3	0	0	1	3	1	0	0	408	3	1	
509	0	1	0	1	1	2	0	1	509	2	3	
510	1	4	5	7	12	9	9	11	510	12	3	
511	0	0	0	0	0	0	0	0	511	0	0	
612	0	1	2	0	0	0	0	1	612	0	0	
613	1	0	1	0	0	4	1	1	613	1	0	
614	0	0	0	0	0	0	0	0	614	1	0	
715	1	0	0	2	1	2	2	1	715	1	1	
716	0	1	0	1	1	5	2	4	716	1		
717	2	0	1	0	1	0	2	1	717	1	1	
718	0	0	0	0	0	0	0	0	718	0	0	
719	2	6	3	2	4	0	5	1	719	2	1	
820	5	3	3	2	0	0	0	0	820	0	1	
821	0	0	0	0	0	0	0	0	821	0	0	
822	6	4	6	4	0	2	12	7	822	4	12	
823	0	0	2	0	1	0	0	0	823	3	6	
824	1	0	0	0	0	0	0	0	824	2	2	
825	0	0	0	0	0	0	0	0	825	2	9	
826	0	0	0	0	2	0	0	0	826	0	0	
GMU 1A	27	26	38	47	45	51	64	61		56	52	
901	1	0	0	0	1	0	0	1	901	1	0	
902	0	0	0	0	0	0	0	0	902	0	0	
1003	0	0	0	0	0	0	0	0	1003	2	0	
1105	1	1	0	2	1	0	1	2	1105	2	1	
1106	0	0	0	0	0	0	0	0	1106	0	0	
1107	3	3	4	0	5	1	10	5	1107	9	10	
1108	4	0	0	1	3	0	1	4	1108	10	0	
1200	1	0	0	0	0	1	0	0	1200	0	0	
1209	0	0	1	0	1	0	0	0	1209	0	0	
1210	3	0	14	0	2	2	3	2	1210	12	13	
1211	0	0	8	0	0	4	4	2	1211	4	10	
1212	0	0	0	0	0	0	0	0	1212	0	0	
1213	0	1	2	2	13	6	4	2	1213	4	4	
1214	7	4	2	4	12	14	14	7	1214	24	17	
1315	4	8	7	7	5	7	16	10	1315	6	20	
1316	1	0	0	6	3	3	6	0	1316	1	7	
1317	11	7	7	5	6	10	15	16	1317	22	10	
1318	7	10	8	8	14	8	26	32	1318	31	22	
1318									1332	4	5	
1318									1323	0	5	
1319	3	4	12	9	7	6	4	6	1319	10	8	
1420	9	7	1	5	6	2	5	5	1420	12	5	
1421	3	0	3	1	7	2	3	5	1421	1	0	
1422	14	11	16	15	11	13	24	19	1422	15	14	
1422									1531	3	0	
1524	0	0	0	0	0	0	0	0	1524	0	0	
1525	1	1	13	4	2	2	0	0	1525	3	4	
1526	2	0	1	0	2	1	0	2	1526	3	2	
1527	6	8	10	12	16	23	19	21	1527	8	8	

Table L-19 (continued)
Number of Black Bear Harvested (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
1527									1530	9	12	
1528	0	0	1	2	3	2	0	2	1528	1	0	
1529	3	5	2	4	3	1	2	9	1529	8	2	
GMU 2	84	70	112	87	123	108	157	152		205	179	
1601	1	0	0	1	2	0	4	3	1601	0	4	
1602	0	0	0	0	0	1	1	2	1602	4	1	
1603	3	1	2	7	4	5	6	3	1603	2	7	
1604	0	0	0	0	0	0	0	0	1604	0	0	
1605	3	0	0	0	2	3	0	2	1605	0	0	
1706	0	0	1	1	1	2	0	2	1706	0	2	
1707	0	0	3	0	1	1	1	1	1707	0	4	
1708	0	0	1	0	3	1	3	1	1708	0	3	
1809	0	0	0	0	0	0	0	0	1809	0	0	
1810	0	0	0	1	0	2	1	1	1810	0	1	
1811	0	0	1	1	1	6	0	5	1811	0	2	
1812	0	0	1	0	2	0	1	0	1812	0	0	
1813	2	0	0	0	0	1	1	1	1813	0	0	
1814	0	0	0	0	1	0	1	0	1814	0	0	
1815	0	0	0	0	0	0	0	0	1815	0	0	
1816	0	0	0	0	0	0	0	0	1816	2	0	
1817	1	0	0	1	0	0	0	0	1817	0	0	
GMU 1B	10	1	9	12	17	22	19	21		8	24	
1901	0	0	0	2	1	1	1	3	1901	3	4	
1901									1910	4	1	
1902	0	0	0	0	0	0	0	0	1902	0	0	
1903	1	3	2	0	1	0	7	12	1903	1	7	
1904	0	1	1	0	0	0	0	0	1904	0	0	
1905	0	0	0	0	0	0	0	0	1905	0	0	
1906	0	1	0	0	1	0	0	0	1906	0	0	
2000	2	1	1	0	2	0	0	0				
2001	0	0	0	0	1	0	0	0				
2007	15	19	13	10	9	25	30	21	2007	20	19	
2008	1	0	1	0	0	0	1	1	2008	1	0	
2009	4	2	10	8	16	21	6	13	5136	7	7	
2009									5137	8	3	
2009									5138	3	0	
2010	7	11	7	11	7	5	8	11	5130	15	13	
2010									5133	4	7	
2010									5134	6	7	
2011	5	9	16	8	8	15	11	16	5131	1	1	
2011									5132	5	12	
2011									5135	0	1	
2012	4	10	5	22	23	16	16	18	5012	36	31	
2013	1	0	6	5	9	13	8	7	5013	19	31	
2014	1	8	22	16	13	26	49	51	5014	8	4	
2014									5016	7	17	
2014									5017	12	22	
2014									5018	13	18	
2015	0	0	0	0	0	0	0	0	5015	0	0	
GMU 3	41	65	84	82	91	122	137	153		173	205	
2202	1	2	2	2	4	1	1	1	2202	0	0	
2203	0	1	3	0	4	0	1	1	2203	1	1	

Table L-19 (continued)
Number of Black Bear Harvested (data not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
2300	0	0	1	0	0	0	0	0	2300	0	0	
2304	3	4	11	9	9	15	12	14	2304	5	10	
2305	3	0	9	4	5	7	4	8	2305	3	3	
2306	3	0	1	4	9	13	6	8	2306	10	7	
2307	0	0	0	0	0	0	0	0	2307	1	2	
2408	1	1	2	2	1	3	2	3	2408	2	4	
2409	0	1	3	4	2	4	2	4	2409	4	0	
2410	1	1	2	0	0	1	0	0	2410	0	2	
2411	0	0	0	0	0	0	0	0	2411	0	2	
2412	0	0	0	0	0	0	0	0	2412	0	0	
2413	0	0	0	0	0	0	0	0	2413	0	0	
2514	5	1	2	2	11	6	1	8	2514	4	4	
2515	2	3	3	5	4	4	3	6	2515	5	4	
2516	0	0	0	0	0	0	0	0	2516	0	0	
2517	5	3	13	7	5	8	12	3	2517	5	7	
2518	0	0	1	1	2	9	5	3	2518	3	1	
2519	0	2	3	0	1	1	0	1	2519	1	3	
2620	0	0	0	0	0	0	0	0	2620	0	0	
2621	0	0	0	0	0	0	0	0	2621	0	0	
2722	3	1	2	0	2	0	3	1	2722	2	0	
									2804	1	0	
2823	3	5	6	6	9	12	3	8	2823	17	19	
2824	0	0	0	2	0	2	2	6	2824	3	5	
2825	1	2	0	1	2	2	1	2	2825	2	0	
2926	6	2	1	0	6	6	9	11	2926	11	16	
2927	2	10	7	1	4	4	6	18	2927	7	11	
GMU 1C	39	39	72	50	80	98	73	106		87	101	
4407	1	1	0	0	0	0	3	0	4407	0	0	
4408	0	3	0	0	0	0	0	1	4408	0	0	
GMU 1D	1	4	0	0	0	0	3	1		0	0	
4503	13	10	21	10	11	21	9	9	4503	4	6	
4503									4508	3	2	
4504	0	1	0	1	0	3	2	1	4504	0	0	
4505	5	1	5	6	2	5	4	2	4505	4	3	
4506	3	2	1	1	6	5	8	4	4506	6	0	
4607	0	0	0	0	0	0	0	0	4607	0	0	
GMU 5A	21	14	27	18	19	34	23	16		17	11	
Unknown	5	5	2	1	1	0	1	0		2	2	
G.Total	228	224	344	297	376	435	477	510		563	587	

Table L-20
Number of Successful Black Bear Hunter-days (data are not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
101	0	3	2	1	1	7	1	0	101	1	0	
404	17	0	16	34	6	8	16	25	404	15	7	
405	0	0	0	6	0	6	5	0	405	20	1	
406	22	7	8	55	47	68	44	61	406	21	3	
407	2	3	2	9	4	1	2	5	407	5	8	
408	5	0	0	1	10	5	0	0	408	3	1	
509	0	1	0	1	1	7	0	1	509	2	3	
510	2	10	16	15	20	12	15	18	510	40	8	
511	0	0	0	0	0	0	0	0	511	0	0	
612	0	1	3	0	0	0	0	1	612	0	0	
613	1	0	1	0	0	13	2	1	613	1	0	
614	0	0	0	0	0	0	0	0	614	1	0	
715	3	0	0	17	3	4	4	3	715	10	1	
716	0	3	0	5	3	34	6	20	716	3	0	
717	7	0	6	0	1	0	6	4	717	7	1	
718	0	0	0	0	0	0	0	0	718	0	0	
719	12	15	3	2	6	0	6	3	719	2	3	
820	11	7	6	4	0	0	0	0	820	0	1	
821	0	0	0	0	0	0	0	0	821	0	0	
822	20	22	23	9	0	4	33	16	822	10	37	
823	0	0	10	0	7	0	0	0	823	6	14	
824	1	0	0	0	0	0	0	0	824	5	6	
825	0	0	0	0	0	0	0	0	825	5	58	
826	0	0	0	0	12	0	0	0	826	0	0	
GMU 1A	103	72	96	159	121	169	140	158		157	152	
901	1	0	0	0	3	0	0	1	901	2	0	
902	0	0	0	0	0	0	0	0	902	0	0	
1003	0	0	0	0	0	0	0	0	1003	2	0	
1105	2	2	0	2	1	0	1	3	1105	2	4	
1106	0	0	0	0	0	0	0	0	1106	0	0	
1107	4	6	17	0	15	4	22	13	1107	22	35	
1108	8	0	0	4	9	0	3	7	1108	30	0	
1200	5	0	0	0	0	1	0	0	1200	0	0	
1209	0	0	6	0	1	0	0	0	1209	0	0	
1210	23	0	39	0	4	4	17	2	1210	30	61	
1211	0	0	12	0	0	9	27	2	1211	6	19	
1212	0	0	0	0	0	0	0	0	1212	0	0	
1213	0	4	8	4	22	5	18	2	1213	29	8	
1214	22	9	3	7	23	60	58	33	1214	118	73	
1315	8	25	10	11	11	25	71	37	1315	9	51	
1316	2	0	0	18	7	15	25	0	1316	6	41	
1317	35	17	13	10	13	18	35	47	1317	91	34	
1318	12	23	23	20	23	34	46	88	1318	88	75	
1318									1332	7	23	
1318									1323	0	28	
1319	9	11	21	37	14	15	8	20	1319	16	21	
1420	38	44	2	19	16	2	13	21	1420	68	11	
1421	18	0	8	7	29	2	38	18	1421	20	0	
1422	44	51	17	58	30	21	65	59	1422	34	39	
1422									1531	10	0	
1524	0	0	0	0	0	0	0	0	1524	0	0	
1525	3	1	38	4	4	2	0	0	1525	5	16	
1526	3	0	0	0	14	1	0	2	1526	7	8	
1527	12	8	17	47	43	81	71	54	1527	15	27	

Table L-20 (continued)
Number of Successful Black Bear Hunter-days (data are not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
1527									1530	17	55	
1528	0	0	3	14	15	3	0	0	1528	1	0	
1529	5	24	10	8	5	6	11	36	1529	19	7	
GMU 2	254	225	247	270	302	308	529	445		654	636	
1601	3	0	0	2	7	0	7	4	1601	0	25	
1602	0	0	0	0	0	4	1	8	1602	22	6	
1603	7	2	4	8	7	8	21	10	1603	8	30	
1604	0	0	0	0	0	0	0	0	1604	0	0	
1605	3	0	0	0	2	4	0	6	1605	0	0	
1706	0	0	4	2	4	4	0	3	1706	0	8	
1707	0	0	5	0	1	1	1	1	1707	0	6	
1708	0	0	1	0	5	2	6	1	1708	0	13	
1809	0	0	0	0	0	0	0	0	1809	0	0	
1810	0	0	0	1	0	5	1	10	1810	0	1	
1811	0	0	3	3	1	7	0	5	1811	0	2	
1812	0	0	4	0	2	0	2	0	1812	0	0	
1813	2	0	0	0	0	2	6	3	1813	0	0	
1814	0	0	0	0	5	0	7	0	1814	0	0	
1815	0	0	0	0	0	0	0	0	1815	0	0	
1816	0	0	0	0	0	0	0	0	1816	10	0	
1817	3	0	0	1	0	0	0	0	1817	0	0	
GMU 1B	18	2	21	17	34	37	52	51		40	91	
1901	0	0	0	11	1	2	2	3	1901	3	13	
1901									1910	10	2	
1902	0	0	0	0	0	0	0	0	1902	0	0	
1903	1	10	11	0	6	0	11	41	1903	1	12	
1904	0	1	1	0	0	0	0	0	1904	0	0	
1905	0	0	0	0	0	0	0	0	1905	0	0	
1906	0	3	0	0	1	0	0	0	1906	0	0	
2000	12	0	6	0	9	0	0	0				
2001	0	0	0	0	2	0	0	0				
2007	36	57	22	30	14	95	92	93	2007	68	69	
2008	1	0	3	0	0	0	1	0	2008	1	0	
2009	9	8	30	19	56	58	9	49	5136	16	23	
2009									5137	32	10	
2009									5138	3	0	
2010	17	34	25	30	23	20	30	17	5130	43	42	
2010									5133	13	25	
2010									5134	16	20	
2011	13	21	84	22	24	66	21	48	5131	7	2	
2011									5132	24	56	
2011									5135	0	1	
2012	17	27	11	67	52	64	45	64	5012	118	104	
2013	14	0	21	13	36	54	19	16	5013	54	174	
2014	7	40	69	58	88	110	236	211	5014	24	13	
2014									5016	26	70	
2014									5017	32	108	
2014									5018	47	53	
2015	0	0	0	0	0	0	0	0	5015	0	0	
GMU 3	127	201	283	250	312	469	466	542		538	797	
2202	1	2	9	3	10	1	1	1	2202	0	0	
2203	0	1	3	0	8	0	4	5	2203	1	1	

Table L-20 (continued)
Number of Successful Black Bear Hunter-days (data are not available from the Alaska Department of Fish and Game for 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
2300	0	0	1	0	0	0	0	0	2300	0	0	
2304	13	19	19	26	17	40	38	34	2304	21	18	
2305	10	0	29	6	10	31	21	14	2305	3	7	
2306	3	0	2	12	18	32	12	25	2306	29	23	
2307	0	0	0	0	0	0	0	0	2307	1	2	
2408	1	1	5	4	3	3	3	4	2408	5	8	
2409	0	2	7	12	12	6	2	6	2409	10	0	
2410	2	3	6	0	0	3	0	0	2410	0	5	
2411	0	0	0	0	0	0	0	0	2411	0	20	
2412	0	0	0	0	0	0	0	0	2412	0	0	
2413	0	0	0	0	0	0	0	0	2413	0	0	
2514	11	1	6	5	35	21	1	9	2514	4	4	
2515	6	46	3	5	12	14	5	104	2515	8	13	
2516	0	0	0	0	0	0	0	0	2516	0	0	
2517	11	5	13	9	12	12	19	13	2517	5	9	
2518	0	0	1	1	7	27	7	4	2518	13	4	
2519	0	13	16	0	4	5	0	0	2519	8	3	
2620	0	0	0	0	0	0	0	0	2620	0	0	
2621	0	0	0	0	0	0	0	0	2621	0	0	
2722	3	2	2	0	3	0	3	1	2722	2	0	
									2804	1	0	
2823	10	10	21	24	22	23	52	22	2823	54	44	
2824	0	0	0	2	0	2	3	19	2824	7	8	
2825	5	3	0	3	5	2	4	4	2825	3	0	
2926	30	10	3	0	11	9	14	39	2926	39	52	
2927	15	29	34	4	40	11	22	49	2927	18	88	
GMU 1C	121	147	180	116	229	242	211	353		232	309	
4407	1	1	0	0	0	0	3	0	4407	0	0	
4408	0	7	0	0	0	0	0	1	4408	0	0	
GMU 1D	1	8	0	0	0	0	3	1		0	0	
4503	79	59	113	47	59	131	64	54	4503	27	34	
4503	0	0	0	0	0	0	0	0	4508	21	11	
4504	0	4	0	9	0	7	6	1	4504	0	0	
4505	37	8	37	29	20	28	27	11	4505	9	15	
4506	17	24	10	1	48	36	72	36	4506	48	0	
4607	0	0	0	0	0	0	0	0	4607	0	0	
GMU 5A	133	95	160	86	127	202	169	102		105	60	
Unknown	15	25	4	3	1	0	12	0		8	9	
G.Total	772	775	991	901	1126	1427	1582	1652		1734	2054	

Table L-21

Estimated Changes in Marten Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	67	64	64	64	64	61	64	64	64	62	64	64	64	60	64	64	64	62	64	64	64	62
303	68	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
404	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257
405	104	98	97	94	91	71	97	93	90	70	94	92	91	68	92	88	86	61	94	92	90	68
406	190	174	174	173	167	120	174	171	163	114	173	167	163	99	174	163	157	86	174	168	164	101
407	64	63	63	63	63	60	62	62	59	42	63	63	59	36	61	60	58	39	63	63	59	36
408	18	17	17	17	17	16	17	17	17	16	17	17	17	16	17	17	17	15	17	17	17	16
509	110	107	107	105	101	87	108	108	105	89	109	108	104	83	106	104	101	83	109	107	103	81
510	239	198	192	175	166	139	189	185	173	137	185	172	165	112	175	160	153	103	194	175	167	120
511	48	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
612	121	119	119	119	115	82	119	119	108	80	119	119	105	66	119	119	119	71	119	119	112	68
613	77	75	76	76	75	72	76	76	74	72	81	81	68	45	77	77	76	67	80	79	72	46
614	20	20	20	20	18	15	20	20	19	15	20	20	17	9	20	20	20	15	20	20	16	9
715	113	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
716	186	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185
717	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
718	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53
719	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124
820	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
821	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141	141
822	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387	387
823	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275	275
824	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
825	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
826	23	23	23	23	23	23	23	23	23	23	20	19	16	12	20	19	17	15	23	23	21	18
901	78	76	76	76	56	53	76	76	55	50	76	76	46	40	76	76	48	38	76	76	52	48
902	202	202	202	202	202	202	202	202	202	202	202	202	202	202	201	201	197	194	202	202	202	202
1003	132	89	66	62	54	41	67	64	54	40	65	58	50	34	64	48	37	19	93	72	49	34
1105	212	210	210	210	186	160	209	209	206	201	210	206	150	118	203	194	157	106	210	203	150	122
1106	12	12	12	12	11	11	11	11	8	7	11	10	8	7	12	10	5	5	12	12	12	12
1107	252	245	245	245	225	220	245	245	215	203	245	229	169	153	245	221	166	155	245	240	203	191
1108	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
1209	140	140	140	137	125	121	139	137	126	122	143	136	105	94	136	127	90	79	139	136	125	122
1210	150	150	150	146	125	121	151	146	120	111	154	145	110	99	146	135	79	63	154	145	110	99
1211	90	89	85	82	72	48	87	82	71	46	85	81	68	43	80	76	61	32	92	83	69	43
1212	49	48	48	46	42	42	48	46	42	42	48	47	36	32	46	46	46	46	48	45	38	37
1213	58	57	56	55	51	47	55	55	51	48	56	48	37	33	54	51	45	42	55	48	38	33
1214	112	102	100	96	84	67	100	96	84	67	110	91	64	51	99	84	58	43	107	90	64	51

[illegible]

Table L-21 (continued)

Estimated Changes in Marten Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1904	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1905	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1906	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1910	149	148	147	147	143	142	146	145	143	142	146	144	141	138	145	141	138	134	147	146	141	138
2007	204	172	172	167	144	125	172	153	136	114	172	149	127	100	172	146	123	95	172	155	134	111
2008	23	23	23	23	23	23	21	20	17	13	21	20	16	12	21	19	16	12	20	20	17	13
2202	24	22	22	22	22	22	22	22	22	22	11	11	11	11	22	22	22	22	12	12	11	11
2203	46	44	44	44	44	44	44	44	44	44	43	43	43	43	44	44	44	44	43	43	43	43
2304	55	52	50	50	50	50	50	50	50	50	48	48	48	48	47	46	41	39	48	48	48	48
2305	92	91	83	82	61	57	83	82	69	56	78	78	62	51	84	83	65	61	80	80	57	50
2306	55	50	50	48	33	28	50	48	39	28	47	47	35	24	47	46	31	27	46	43	31	25
2408	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
2409	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
2410	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
2411	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
2412	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
2413	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
2514	45	45	45	45	45	45	45	45	39	38	45	45	37	27	45	45	39	38	45	45	39	31
2515	60	60	60	60	60	60	60	60	60	60	60	60	60	60	57	57	57	57	60	60	60	60
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	27	27	27	27	25	23	26	26	24	22	27	27	25	22	25	25	21	20	26	26	24	23
2518	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
2519	37	37	37	37	37	31	37	37	36	30	37	37	35	29	37	37	30	28	37	37	32	30
2620	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2722	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2823	208	208	171	169	168	167	171	170	169	165	127	127	127	127	124	120	119	113	127	127	127	127
2824	30	30	30	30	30	30	30	30	30	30	30	30	30	30	29	27	26	20	30	30	30	30
2825	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
2926	172	172	172	172	163	157	172	171	141	128	156	156	126	121	172	172	154	117	150	144	124	119
2927	186	186	186	182	177	170	186	186	178	170	166	160	112	100	186	186	173	169	172	164	121	104
3001	119	103	100	100	97	97	95	95	92	92	72	68	64	63	70	70	69	67	82	81	81	79
3002	49	37	35	35	33	33	33	33	32	32	31	30	30	30	31	31	30	30	34	34	34	34
3003	68	65	57	57	54	54	55	55	51	51	46	43	42	41	47	47	46	43	52	52	51	48
3104	105	88	87	87	85	82	85	84	81	79	68	64	59	56	68	68	67	65	71	70	66	61
3105	71	71	68	68	68	68	69	69	69	69	58	58	58	58	56	56	56	56	68	68	68	68
3206	50	50	50	50	50	50	50	50	50	50	50	50	50	50	39	39	39	39	50	50	50	50
3207	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94

Table L-21 (continued)

Estimated Changes in Marten Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3308	200	157	148	138	126	98	143	137	122	98	125	118	109	88	149	137	113	85	138	123	110	88
3309	49	49	49	47	46	38	47	45	44	38	43	40	38	38	49	47	45	38	40	39	39	38
3310	86	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
3311	75	74	74	74	74	74	63	63	61	60	61	57	54	53	55	53	50	49	57	57	54	54
3312	26	26	22	22	20	20	22	22	20	20	18	18	17	17	16	16	16	15	19	18	18	18
3313	116	89	69	69	54	51	69	69	53	50	54	52	50	44	67	61	46	40	66	59	50	45
3314	51	48	42	42	39	39	42	42	39	39	33	31	30	29	29	29	28	26	32	31	31	30
3315	74	69	55	53	47	46	52	50	46	45	54	51	47	44	55	53	39	37	57	51	46	44
3416	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
3417	122	122	122	122	122	122	122	122	122	122	121	121	121	121	122	122	122	122	122	122	122	122
3418	72	72	72	72	72	72	72	72	72	72	65	65	65	65	72	72	72	72	72	72	72	72
3419	73	73	73	73	73	73	73	73	73	73	71	71	71	71	73	73	73	73	73	73	73	73
3420	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
3421	55	55	54	54	54	54	55	55	55	55	53	53	53	53	55	55	55	55	55	55	55	55
3523	77	73	73	73	72	72	71	70	67	64	70	66	62	56	68	66	57	47	67	58	53	43
3524	15	15	15	15	12	10	15	15	12	10	15	14	11	7	15	15	12	10	12	12	10	7
3525	128	111	106	104	93	77	111	104	91	71	110	95	83	58	102	100	83	59	91	82	74	57
3526	66	58	54	53	49	48	54	52	46	42	45	44	41	36	51	48	40	32	50	42	35	28
3551	103	92	92	91	74	61	92	89	72	60	91	86	63	43	92	89	60	42	73	72	60	41
3627	54	49	45	43	39	33	44	42	39	32	39	38	35	30	45	43	38	31	42	39	36	30
3628	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
3629	128	121	121	120	118	107	119	115	112	101	112	107	105	104	121	115	109	85	89	88	77	74
3630	55	55	55	55	55	55	53	52	51	49	49	45	43	40	46	44	39	34	53	46	44	40
3731	71	68	61	60	57	56	59	59	57	56	57	55	52	50	56	55	45	43	63	61	60	59
3732	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
3733	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159
3734	120	120	120	120	120	120	120	120	120	120	120	120	120	120	102	102	102	102	120	120	120	120
3835	54	54	54	52	51	41	53	51	50	41	54	53	42	33	53	50	47	42	44	44	39	30
3836	93	93	92	92	91	90	91	91	90	88	96	95	75	60	93	83	76	62	78	78	70	57
3837	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
3938	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149
3939	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
3940	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119
4041	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104
4042	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
4043	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133	133
4044	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
4054	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111	111

Table L-21 (continued)
Estimated Changes in Marten Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4055	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
4145	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
4146	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
4147	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60
4148	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78
4149	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
4150	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
4222	115	113	113	113	113	113	116	110	104	96	112	103	96	89	111	105	101	94	105	102	96	92
4252	23	23	23	23	23	23	26	22	19	15	24	20	17	14	24	20	18	14	20	19	16	14
4253	58	52	52	52	52	52	51	44	38	31	49	42	37	32	47	38	34	26	44	41	36	33
4256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4302	8	7	7	7	7	7	6	6	6	6	3	3	3	3	7	7	7	7	3	3	3	3
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
4408	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
4503	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123
4504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4505	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
4506	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
4508	207	196	196	196	193	191	194	184	175	168	196	195	185	132	182	179	165	148	196	196	191	142
4607	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5012	348	296	296	262	233	180	284	254	224	186	261	232	200	154	256	231	200	157	261	239	221	183
5013	140	138	138	134	126	121	141	139	125	120	138	137	117	110	134	129	85	61	138	134	118	111
5014	109	106	102	92	76	65	106	103	76	67	101	101	72	62	101	98	64	51	100	95	72	61
5015	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
5016	180	179	178	177	176	176	179	179	179	179	179	179	179	179	178	178	176	176	179	179	179	179
5017	263	263	263	263	263	263	267	267	249	219	267	267	247	212	261	259	232	194	263	263	263	263
5018	98	95	94	90	83	79	97	96	82	77	95	94	83	79	96	95	74	60	94	92	83	79
5130	176	174	167	167	152	143	167	167	154	141	162	162	149	132	161	161	142	118	163	162	148	132
5131	127	119	119	119	106	98	118	118	107	97	115	114	103	92	115	115	97	79	115	114	103	92
5132	70	58	58	58	49	42	58	58	48	39	57	57	47	37	58	56	47	37	58	57	47	37
5133	179	178	178	178	178	178	178	178	159	131	174	174	151	120	175	175	153	123	173	173	151	124
5134	167	156	152	151	141	131	153	153	144	124	153	153	144	120	153	153	140	115	152	152	143	121
5135	63	63	62	62	54	49	61	61	53	47	60	59	53	45	60	60	54	48	61	59	53	45
5136	94	85	85	85	64	51	84	83	65	51	80	77	62	45	79	77	61	46	82	78	62	45
5137	79	79	78	78	78	78	79	79	78	78	79	79	78	78	78	78	78	78	79	79	78	78
5138	101	93	93	93	74	63	93	93	80	54	93	93	76	50	93	93	78	50	93	93	77	50

Table L-22

Estimated Changes in Marten Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means marten are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	96	96	96	96	91	96	96	96	93	96	96	96	90	96	96	96	93	96	96	96	93
303	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	94	93	90	88	68	93	89	87	67	90	88	88	65	88	85	83	59	90	88	87	65
406	92	92	91	88	63	92	90	86	60	91	88	86	52	92	86	83	45	92	88	86	53
407	98	98	98	98	94	97	97	92	66	98	98	92	56	95	94	91	61	98	98	92	56
408	94	94	94	94	89	94	94	94	89	94	94	94	89	94	94	94	83	94	94	94	89
509	97	97	95	92	79	98	98	95	81	99	98	95	75	96	95	92	75	99	97	94	74
510	83	80	73	69	58	79	77	72	57	77	72	69	47	73	67	64	43	81	73	70	50
511	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
612	98	98	98	95	68	98	98	89	66	98	98	87	55	98	98	98	59	98	98	93	56
613	97	99	99	97	94	99	99	96	94	105	105	88	58	100	100	99	87	104	103	94	60
614	100	100	100	90	75	100	100	95	75	100	100	85	45	100	100	100	75	100	100	80	45
715	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
716	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	87	83	70	52	87	83	74	65	100	100	91	78
901	97	97	97	72	68	97	97	71	64	97	97	59	51	97	97	62	49	97	97	67	62
902	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	96	100	100	100	100
1003	67	50	47	41	31	51	48	41	30	49	44	38	26	48	36	28	14	70	55	37	26
1105	99	99	99	88	75	99	99	97	95	99	97	71	56	96	92	74	50	99	96	71	58
1106	100	100	100	92	92	92	92	67	58	92	83	67	58	100	83	42	42	100	100	100	100
1107	97	97	97	89	87	97	97	85	81	97	91	67	61	97	88	66	62	97	95	81	76
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	98	89	86	99	98	90	87	102	97	75	67	97	91	64	56	99	97	89	87
1210	100	100	97	83	81	101	97	80	74	103	97	73	66	97	90	53	42	103	97	73	66
1211	99	94	91	80	53	97	91	79	51	94	90	76	48	89	84	68	36	102	92	77	48
1212	98	98	94	86	86	98	94	86	86	98	96	73	65	94	94	94	94	98	92	78	76
1213	98	97	95	88	81	95	95	88	83	97	83	64	57	93	88	78	72	95	83	66	57

Table L-22 (continued)
Estimated Changes in Marten Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 Percent) (a "-" means marten are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1214	91	89	86	75	60	89	86	75	60	98	81	57	46	88	75	52	38	96	80	57	46
1315	72	72	69	46	38	72	66	45	37	72	63	42	33	72	66	39	30	71	65	42	34
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	65	65	65	61	51	65	64	60	49	65	62	47	33	59	57	45	34	62	60	46	34
1318	95	95	92	59	49	95	95	62	51	95	90	65	43	95	91	67	46	95	89	56	42
1319	83	83	83	67	56	83	81	60	48	83	72	51	33	83	83	62	49	81	76	57	43
1323	99	93	90	80	77	94	93	80	77	91	88	81	74	88	87	75	65	91	88	78	74
1332	88	86	84	74	68	89	86	74	66	87	81	63	49	85	82	66	56	84	80	61	50
1420	59	59	56	35	24	59	52	35	24	59	51	32	20	59	55	31	19	55	49	32	20
1421	82	82	78	60	51	82	78	54	42	82	76	49	36	82	75	42	31	82	77	53	43
1422	72	71	65	56	49	70	57	49	41	61	55	47	38	64	56	36	27	73	64	44	34
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	61	39	34	31	25	39	37	31	25	37	31	28	21	35	29	24	13	53	35	30	21
1526	95	94	93	93	93	92	90	86	83	90	88	83	80	90	86	80	77	89	88	84	80
1527	81	80	72	61	51	80	73	59	47	80	71	56	38	80	71	49	31	69	66	59	41
1528	90	86	84	80	78	84	82	76	73	78	73	65	57	78	75	65	55	75	73	69	61
1529	77	72	65	58	48	69	62	53	41	71	62	50	36	75	67	50	38	65	58	48	35
1530	73	73	64	50	38	75	66	51	38	74	65	52	36	72	63	44	26	64	61	52	35
1531	71	63	57	48	42	65	57	49	43	58	52	43	37	51	40	24	15	66	58	46	40
1601	100	98	98	77	64	98	98	79	64	99	99	75	55	96	96	77	63	100	98	77	54
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	82	71	103	103	88	78
1603	96	90	90	84	80	90	88	84	78	88	86	80	70	88	84	78	72	88	88	82	76
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	81	81	80	75	69	84	81	69	56	83	79	68	54	81	79	68	56	81	80	72	56
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ERR	ERR	ERR	ERR	ERR
1810	100	100	91	80	73	102	98	79	68	107	105	80	52	104	104	82	64	109	107	82	55
1811	100	99	94	90	87	99	97	92	87	97	97	86	75	97	97	89	82	100	100	93	85
1812	100	99	98	95	93	99	98	96	94	98	98	91	85	99	98	94	89	95	94	91	87
1813	80	80	80	80	80	80	80	80	80	78	77	69	66	81	80	76	72	81	81	69	67
1814	100	98	97	90	85	98	97	90	85	100	100	90	85	98	98	89	82	95	95	90	85
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	85	79	72	68	89	89	83	68	87	87	79	64	83	83	72	57	85	83	81	66
1817	100	100	100	94	80	100	100	94	80	100	100	81	49	100	100	100	78	100	100	84	55
1901	96	93	89	74	69	86	81	72	67	87	78	66	57	85	73	63	49	93	89	68	57

Table L-22 (continued)

Estimated Changes in Marten Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means marten are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1903	94	94	94	79	66	94	89	77	63	94	85	69	53	90	81	68	51	94	87	72	56
1904	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1905	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1906	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1910	99	99	99	96	95	98	97	96	95	98	97	95	93	97	95	93	90	99	98	95	93
2007	84	84	82	71	61	84	75	67	56	84	73	62	49	84	72	60	47	84	76	66	54
2008	100	100	100	100	100	91	87	74	57	91	87	70	52	91	83	70	52	87	87	74	57
2202	92	92	92	92	92	92	92	92	92	46	46	46	46	92	92	92	92	50	50	46	46
2203	96	96	96	96	96	96	96	96	96	93	93	93	93	96	96	96	96	93	93	93	93
2304	95	91	91	91	91	91	91	91	91	87	87	87	87	85	84	75	71	87	87	87	87
2305	99	90	89	66	62	90	89	75	61	85	85	67	55	91	90	71	66	87	87	62	54
2306	91	91	87	60	51	91	87	71	51	85	85	64	44	85	84	56	49	84	78	56	45
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	100	87	84	100	100	82	60	100	100	87	84	100	100	87	69
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	95	95	95	95	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	93	85	96	96	89	81	100	100	93	81	93	93	78	74	96	96	89	85
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	100	84	100	100	97	81	100	100	95	78	100	100	81	76	100	100	86	81
2620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2823	100	82	81	81	80	82	82	81	79	61	61	61	61	60	58	57	54	61	61	61	61
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	97	90	87	67	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	100	100	95	91	100	99	82	74	91	91	73	70	100	100	90	68	87	84	72	69
2927	100	100	98	95	91	100	100	96	91	89	86	60	54	100	100	93	91	92	88	65	56
3001	87	84	84	82	82	80	80	77	77	61	57	54	53	59	59	58	56	69	68	68	66
3002	76	71	71	67	67	67	67	65	65	63	61	61	61	63	63	61	61	69	69	69	69
3003	96	84	84	79	79	81	81	75	75	68	63	62	60	69	69	68	63	76	76	75	71
3104	84	83	83	81	78	81	80	77	75	65	61	56	53	65	65	64	62	68	67	63	58

Table L-22 (continued)

Estimated Changes in Marten Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means marten are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3105	100	96	96	96	96	97	97	97	97	82	82	82	82	79	79	79	79	96	96	96	96
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	78	78	78	78	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	79	74	69	63	49	72	69	61	49	63	59	55	44	75	69	57	43	69	62	55	44
3309	100	100	96	94	78	96	92	90	78	88	82	78	78	100	96	92	78	82	80	80	78
3310	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
3311	99	99	99	99	99	84	84	81	80	81	76	72	71	73	71	67	65	76	76	72	72
3312	100	85	85	77	77	85	85	77	77	69	69	65	65	62	62	62	58	73	69	69	69
3313	77	59	59	47	44	59	59	46	43	47	45	43	38	58	53	40	34	57	51	43	39
3314	94	82	82	76	76	82	82	76	76	65	61	59	57	57	57	55	51	63	61	61	59
3315	93	74	72	64	62	70	68	62	61	73	69	64	59	74	72	53	50	77	69	62	59
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3417	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	90	90	90	90	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	97	97	97	97	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	98	98	98	98	100	100	100	100	96	96	96	96	100	100	100	100	100	100	100	100
3523	95	95	95	94	94	92	91	87	83	91	86	81	73	88	86	74	61	87	75	69	56
3524	100	100	100	80	67	100	100	80	67	100	93	73	47	100	100	80	67	80	80	67	47
3525	87	83	81	73	60	87	81	71	55	86	74	65	45	80	78	65	46	71	64	58	45
3526	88	82	80	74	73	82	79	70	64	68	67	62	55	77	73	61	48	76	64	53	42
3551	89	89	88	72	59	89	86	70	58	88	83	61	42	89	86	58	41	71	70	58	40
3627	91	83	80	72	61	81	78	72	59	72	70	65	56	83	80	70	57	78	72	67	56
3628	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3629	95	95	94	92	84	93	90	88	79	88	84	82	81	95	90	85	66	70	69	60	58
3630	100	100	100	100	100	96	95	93	89	89	82	78	73	84	80	71	62	96	84	80	73
3731	96	86	85	80	79	83	83	80	79	80	77	73	70	79	77	63	61	89	86	85	83
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	85	85	85	85	100	100	100	100
3835	100	100	96	94	76	98	94	93	76	100	98	78	61	98	93	87	78	81	81	72	56
3836	100	99	99	98	97	98	98	97	95	103	102	81	65	100	89	82	67	84	84	75	61
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-22 (continued)

Estimated Changes in Marten Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means marten are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	98	98	98	98	98	101	96	90	83	97	90	83	77	97	91	88	82	91	89	83	80
4252	100	100	100	100	100	113	96	83	65	104	87	74	61	104	87	78	61	87	83	70	61
4253	90	90	90	90	90	88	76	66	53	84	72	64	55	81	66	59	45	76	71	62	57
4256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4302	88	88	88	88	88	75	75	75	75	38	38	38	38	88	88	88	88	38	38	38	38
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	95	95	95	93	92	94	89	85	81	95	94	89	64	88	86	80	71	95	95	92	69
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	85	85	75	67	52	82	73	64	53	75	67	57	44	74	66	57	45	75	69	64	53
5013	99	99	96	90	86	101	99	89	86	99	98	84	79	96	92	61	44	99	96	84	79
5014	97	94	84	70	60	97	94	70	61	93	93	66	57	93	90	59	47	92	87	66	56
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	99	99	98	98	98	99	99	99	99	99	99	99	99	99	99	98	98	99	99	99	99
5017	100	100	100	100	100	102	102	95	83	102	102	94	81	99	98	88	74	100	100	100	100
5018	97	96	92	85	81	99	98	84	79	97	96	85	81	98	97	76	61	96	94	85	81
5130	99	95	95	86	81	95	95	88	80	92	92	85	75	91	91	81	67	93	92	84	75
5131	94	94	94	83	77	93	93	84	76	91	90	81	72	91	91	76	62	91	90	81	72
5132	83	83	83	70	60	83	83	69	56	81	81	67	53	83	80	67	53	83	81	67	53
5133	99	99	99	99	99	99	99	89	73	97	97	84	67	98	98	85	69	97	97	84	69
5134	93	91	90	84	78	92	92	86	74	92	92	86	72	92	92	84	69	91	91	86	72

Table L-22 (continued)

Estimated Changes in Marten Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means marten are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5135	100	98	98	86	78	97	97	84	75	95	94	84	71	95	95	86	76	97	94	84	71
5136	90	90	90	68	54	89	88	69	54	85	82	66	48	84	82	65	49	87	83	66	48
5137	100	99	99	99	99	100	100	99	99	100	100	99	99	99	99	99	99	100	100	99	99
5138	92	92	92	73	62	92	92	79	53	92	92	75	50	92	92	77	50	92	92	76	50

Table L-23
Number of Marten Harvested (Years indicated cover a "trapping year," which extends from the fall of one year to the spring of the next year; data are not available from the ADF&G for 1988, 1989, or 1990)

Old MHU#	1984 1985	1985 1986	1986 1987	1987 1988	New WAA#	1988 1989	1989 1990
101	0	0	0	0	101		
303	0	0	0	0	303		
404	0	0	0	7	404		
405	0	0	0	0	405		
406	30	20	22	28	406		
407	11	1	13	0	407		
408	0	1	0	0	408		
509	2	0	0	0	509		
510	27	8	17	23	510		
511	0	0	0	7	511		
612	5	9	8	18	612		
613	45	18	26	71	613		
614	0	0	0	0	614		
715	2	0	23	52	715		
716	8	0	11	18	716		
717	0	26	0	0	717		
718	0	0	0	0	718		
719	22	4	0	0	719		
820	0	39	0	32	820		
821	0	0	0	0	821		
822	21	0	0	42	822		
823	12	12	0	0	823		
824	0	0	0	0	824		
825	5	0	0	0	825		
826	13	0	7	0	826		
GMU 1A	203	138	127	298			
901	0	0	0	0	901		
902	0	0	0	0	902		
1003	0	0	0	0	1003		
1105	98	72	21	47	1105		
1106	0	0	0	0	1106		
1107	172	65	38	99	1107		
1108	100	0	0	93	1108		
1209	44	0	0	0	1209		
1210	20	53	0	82	1210		
1211	43	13	62	56	1211		
1212	16	0	22	0	1212		
1213	0	0	0	95	1213		
1214	35	11	3	37	1214		
1315	26	2	23	64	1315		
1316	0	0	0	0	1316		
1317	41	70	32	86	1317		
1318	152	93	51	100	1318		
1318					1332		
1318					1323		
1319	34	27	6	46	1319		
1420	30	0	5	71	1420		
1421	72	3	2	69	1421		
1422	70	47	6	69	1422		
1422					1531		
1524	0	0	0	0	1524		
1525	1	67	12	21	1525		
1526	0	0	0	0	1526		
1527	22	42	15	65	1527		

Table L-23 (continued)
Number of Marten Harvested (Years indicated cover a "trapping year," which extends from the fall of one year to the spring of the next year; data are not available from the ADF&G for 1988, 1989, or 1990)

Old MHU#	1984 1985	1985 1986	1986 1987	1987 1988	New WAA#	1988 1989	1989 1990
1527					1530		
1528	8	8	2	10	1528		
1529	21	16	0	22	1529		
GMU 2	1,005	589	300	1,132			
1601	0	14	10	12	1601		
1602	15	6	16	11	1602		
1603	17	5	2	12	1603		
1604	0	0	0	0	1604		
1605	37	11	32	33	1605		
1706	5	0	0	6	1706		
1707	51	16	7	3	1707		
1708	4	18	33	0	1708		
1809	0	0	0	0	1809		
1810	0	4	9	24	1810		
1811	0	3	19	28	1811		
1812	16	0	0	0	1812		
1813	19	0	14	77	1813		
1814	0	0	0	50	1814		
1815	0	0	0	0	1815		
1816	11	0	7	0	1816		
1817	13	6	0	14	1817		
GMU 1B	188	83	149	270			
1901	7	0	0	20	1901		
1901					1910		
1902	0	0	0	0	1902		
1903	2	0	0	6	1903		
1904	0	0	0	0	1904		
1905	0	0	0	0	1905		
1906	0	0	0	0	1906		
1909	6	0	0	0			
2007	94	36	78	72	2007		
2008	2	2	0	1	2008		
2009	42	11	6	101	5136		
2009					5137		
2009					5138		
2010	11	28	3	46	5130		
2010					5133		
2010					5134		
2011	13	33	16	82	5131		
2011					5132		
2011					5135		
2012	30	22	0	24	5012		
2013	28	13	0	0	5013		
2014	32	10	7	5	5014		
2014					5016		
2014					5017		
2014					5018		
2015					5015		
GMU 3	267	155	110	357			
2202	16	14	10	0	2202		
2203	0	0	0	0	2203		
2300	0	0	0	30	2300		

Table L-23 (continued)
Number of Marten Harvested (Years indicated cover a "trapping year," which extends from the fall of one year to the spring of the next year; data are not available from the ADF&G for 1988, 1989, or 1990)

Old MHU#	1984 1985	1985 1986	1986 1987	1987 1988	New WAA#	1988 1989	1989 1990
2304	1	2	31	36	2304		
2305	2	6	0	16	2305		
2306	26	17	13	15	2306		
2307	17	8	14	37	2307		
2400	0	0	0	24	2400		
2408	0	0	0	0	2408		
2409	6	25	5	0	2409		
2410	0	4	1	0	2410		
2411	0	0	0	0	2411		
2412	0	0	1	0	2412		
2413	0	0	6	0	2413		
2514	13	4	9	10	2514		
2515	39	13	19	51	2515		
2516	0	0	0	0	2516		
2517	15	4	11	5	2517		
2518	8	18	34	23	2518		
2519	0	2	0	0	2519		
2620	0	0	0	0	2620		
2621	0	0	0	0	2621		
2722	0	0	0	0	2722		
2800	0	0	0	7	2800		
2823	17	10	45	11	2823		
2824	0	0	0	0	2824		
2825	2	0	13	0	2825		
2926	47	0	29	42	2926		
2927	36	24	0	43	2927		
GMU 1C	245	151	241	350			
3000	0	17	0	0	3000		
3001	14	6	49	56	3001		
3001					3002		
3001					3314		
3002	14	11	14	14	3002		
3003	19	15	20	30	3003		
3004	8	0	0	0			
3005	8	0	0	0			
3008	12	0	0	0			
3104	2	12	26	36	3104		
3105	0	2	0	10	3105		
3206	14	0	13	0	3206		
3207	4	0	23	0	3207		
3233	6	0	0	0			
3300	147	139	144	0	3300		
3308	41	21	0	63	3308		
3309	0	33	3	18	3309		
3310	41	0	13	0	3310		
3311	7	6	1	20	3311		
3312	0	0	5	17	3312		
3313	9	54	2	24	3313		
3315	11	6	0	10	3315		
3348	0	82	0	0			
3400	7	0	10	0	3400		
3416	15	29	18	40	3416		
3417	0	18	26	67	3417		
3418	38	0	0	0	3418		

Table L-23 (continued)
Number of Marten Harvested (Years indicated cover a "trapping year," which extends from the fall of one year to the spring of the next year; data are not available from the ADF&G for 1988, 1989, or 1990)

Old MHU#	1984 1985	1985 1986	1986 1987	1987 1988	New WAA#	1988 1989	1989 1990
3419	67	76	0	30	3419		
3419					3421		
3420	39	0	3	0	3420		
3500	70	0	21	0			
3521					4256		
3522	28	37	1	29	4222		
3523	323	212	156	99	3523		
3524	50	0	11	38	3524		
3523					4252		
3523					4253		
3600	7	203	64	0			
3623	8	0	61	0			
3625					3525		
3625					3551		
3626	20	14	14	39	3526		
3627	81	35	0	0	3627		
3628	0	56	0	0	3628		
3629	18	0	0	7	3629		
3630	12	0	24	2	3630		
3700	29	55	0	0	3700		
3703	31	0	0	0			
3726	0	12	0	0			
3731	0	0	36	0	3731		
3732	0	0	6	74	3732		
3733	31	0	0	71	3733		
3734	5	1	10	15	3734		
3800	0	0	4	15	3800		
3835	9	0	0	14	3835		
3836	14	0	22	39	3836		
3837	0	1	0	13	3837		
3938	0	24	24	2	3938		
3939	38	21	5	16	3939		
3940	14	0	18	0	3940		
4000	0	0	50	0	4000		
4041	0	0	0	0	4041		
4041	0	0	0	0	4055		
4042	0	0	0	40	4042		
4042					4054		
4043	0	0	0	0	4043		
4044	0	0	16	0	4044		
4145	19	0	0	1	4145		
4146	19	0	0	2	4146		
4147	0	5	35	7	4147		
4147					4150		
4148	6	4	14	5	4148		
4148					4149		
GMU 4	1,355	1,207	962	963			
4407	0	0	0	0	4407		
4408	0	0	0	0	4408		
GMU 1D	0	0	0	0			
4500	0	0	0	21	4500		
4503	63	0	38	75	4503		
4503					4508		

Table L-23 (continued)
Number of Marten Harvested (Years indicated cover a "trapping year," which extends from the fall of one year to the spring of the next year; data are not available from the ADF&G for 1988, 1989, or 1990)

Old MHU#	1984 1985	1985 1986	1986 1987	1987 1988	New WAA#	1988 1989	1989 1990
4504	0	0	0	0	4504		
4505	0	0	0	0	4505		
4506	0	0	0	0	4506		
4607	0	0	0	0	4607		
GMU 5A	63	0	38	96			
Unknown	34	0	1	2			
G.Total	3,369	2,323	1,928	3,468			

Table L-24

Estimated Changes in River Otter Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	25	26	26	26	26
303	52	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
404	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
405	45	41	41	41	41	41	41	41	41	41	41	41	41	41	35	34	33	27	41	41	41	41
406	88	77	77	77	77	77	77	77	77	77	77	77	77	77	90	86	85	60	77	77	77	77
407	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
408	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
509	42	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	39	41	41	41	41
510	108	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	66	86	86	86	86
511	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
612	58	56	56	56	56	56	56	56	56	56	56	56	56	56	55	55	54	47	56	56	56	56
613	38	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	36	37	37	37	37
614	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
715	51	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
716	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
717	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
719	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
820	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
821	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
822	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
823	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
824	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
825	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
826	13	13	13	13	13	13	13	13	13	13	13	13	13	13	18	18	14	14	13	13	13	13
901	49	48	48	48	48	48	48	48	48	48	48	48	48	48	42	41	35	31	48	48	48	48
902	145	145	145	145	145	145	145	145	145	145	145	145	145	145	139	139	137	136	145	145	145	145
1003	60	50	50	50	50	50	50	50	50	50	50	50	50	50	57	53	51	18	50	50	50	50
1105	118	117	117	117	117	117	117	117	117	117	117	117	117	117	75	74	65	57	117	117	117	117
1106	14	14	14	14	14	14	14	14	14	14	14	14	14	14	4	3	1	1	14	14	14	14
1107	134	129	129	129	129	129	129	129	129	129	129	129	129	129	111	104	82	76	129	129	129	129
1108	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1209	76	76	76	76	76	76	76	76	76	76	76	76	76	76	51	49	39	37	76	76	76	76
1210	83	83	83	83	83	83	83	83	83	83	83	83	83	83	60	58	40	36	83	83	83	83
1211	53	52	52	52	52	52	52	52	52	52	52	52	52	52	39	38	35	23	52	52	52	52
1212	25	25	25	25	25	25	25	25	25	25	25	25	25	25	20	20	20	20	25	25	25	25
1213	32	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	30	31	31	31	31
1214	37	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	23	34	34	34	34
1315	73	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	38	54	54	54	54
1316	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
1317	41	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	19	19	19	19
1318	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	29	23	23	23	23	23

Table L-24 (continued)
Estimated Changes in River Otter Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	44	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
1323	47	46	46	46	46	46	46	46	46	46	46	46	46	46	34	34	31	29	46	46	46	46
1332	61	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	45	53	53	53	53
1420	34	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
1421	57	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
1422	94	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
1524	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1525	33	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	16	30	30	30	30
1526	65	60	60	60	60	60	60	60	60	60	60	60	60	60	60	59	57	50	60	60	60	60
1527	33	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	19	28	28	28	28
1528	21	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
1529	68	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
1530	58	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	27	48	48	48	48
1531	92	78	78	78	78	78	78	78	78	78	78	78	78	78	55	52	42	20	78	78	78	78
1601	27	27	27	27	27	27	27	27	27	27	27	27	27	27	25	25	22	21	27	27	27	27
1602	49	49	49	49	49	49	49	49	49	49	49	49	49	49	47	47	43	41	49	49	49	49
1603	27	25	25	25	25	25	25	25	25	25	25	25	25	25	20	20	19	19	25	25	25	25
1604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1605	42	33	33	33	33	33	33	33	33	33	33	33	33	33	33	32	31	29	33	33	33	33
1706	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
1707	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
1708	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
1809	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
1810	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	19	19	19	19
1811	37	36	36	36	36	36	36	36	36	36	36	36	36	36	33	33	31	31	36	36	36	36
1812	39	39	39	39	39	39	39	39	39	39	39	39	39	39	37	37	37	37	39	39	39	39
1813	42	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	23	23	23	23
1814	26	25	25	25	25	25	25	25	25	25	25	25	25	25	23	23	22	22	25	25	25	25
1815	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1816	20	20	20	20	20	20	20	20	20	20	20	20	20	20	14	14	12	11	20	20	20	20
1817	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	48	52	52	52	52
1901	107	103	103	103	103	103	103	103	103	103	103	103	103	103	65	58	54	50	103	103	103	103
1902	17	16	16	16	16	16	16	16	16	16	16	16	16	16	6	6	4	4	16	16	16	16
1903	55	55	55	55	55	55	55	55	55	55	55	55	55	55	40	38	34	31	55	55	55	55
1904	33	28	28	28	28	28	28	28	28	28	28	28	28	28	14	10	9	8	28	28	28	28
1905	81	68	68	68	68	68	68	68	68	68	68	68	68	68	48	43	41	41	68	68	68	68
1906	40	36	36	36	36	36	36	36	36	36	36	36	36	36	14	14	6	7	36	36	36	36
1910	95	94	94	94	94	94	94	94	94	94	94	94	94	94	82	81	80	79	94	94	94	94
2007	68	64	64	64	64	64	64	64	64	64	64	64	64	64	54	49	47	45	64	64	64	64
2008	14	14	14	14	14	14	14	14	14	14	14	14	14	14	8	8	7	7	14	14	14	14
2202	24	20	20	20	20	20	20	20	20	20	20	20	20	20	19	19	19	19	20	20	20	20
2203	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

Table L-24 (continued)

Estimated Changes in River Otter Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	25	20	20	20	20	20	20	20	20	20	20	20	20	20	17	17	17	17	20	20	20	20
2305	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	54	54	55	55	55	55
2306	29	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	24	24	24	24
2408	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2409	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
2410	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
2411	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
2412	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2413	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
2514	23	23	23	23	23	23	23	23	23	23	23	23	23	23	21	20	20	20	23	23	23	23
2515	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18	18	18	19	19	19	19
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	16	16	16	16	16	16	16	16	16	16	16	16	16	16	13	13	12	12	16	16	16	16
2518	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
2519	25	25	25	25	25	25	25	25	25	25	25	25	25	25	22	22	19	20	25	25	25	25
2620	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2	2	2	2	4	4	4	4
2621	6	6	6	6	6	6	6	6	6	6	6	6	6	6	1	1	1	1	6	6	6	6
2722	18	18	18	18	18	18	18	18	18	18	18	18	18	18	16	16	16	16	18	18	18	18
2823	122	122	122	122	122	122	122	122	122	122	122	122	122	122	87	86	86	86	122	122	122	122
2824	16	16	16	16	16	16	16	16	16	16	16	16	16	16	13	12	12	12	16	16	16	16
2825	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
2926	92	92	92	92	92	92	92	92	92	92	92	92	92	92	90	89	84	77	92	92	92	92
2927	75	75	75	75	75	75	75	75	75	75	75	75	75	75	71	70	69	69	75	75	75	75
3001	83	63	63	63	63	63	63	63	63	63	63	63	63	63	35	35	34	34	63	63	63	63
3002	32	20	20	20	20	20	20	20	20	20	20	20	20	20	15	15	15	15	20	20	20	20
3003	50	48	48	48	48	48	48	48	48	48	48	48	48	48	28	28	28	27	48	48	48	48
3104	51	43	43	43	43	43	43	43	43	43	43	43	43	43	32	32	32	32	43	43	43	43
3105	39	39	39	39	39	39	39	39	39	39	39	39	39	39	37	37	37	37	39	39	39	39
3206	51	51	51	51	51	51	51	51	51	51	51	51	51	51	45	45	45	45	51	51	51	51
3207	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
3308	110	69	69	69	69	69	69	69	69	69	69	69	69	69	55	52	48	46	69	69	69	69
3309	28	28	28	28	28	28	28	28	28	28	28	28	28	28	26	25	25	24	28	28	28	28
3310	64	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
3311	47	45	45	45	45	45	45	45	45	45	45	45	45	45	33	32	31	31	45	45	45	45
3312	16	14	14	14	14	14	14	14	14	14	14	14	14	14	7	7	7	7	14	14	14	14
3313	70	39	39	39	39	39	39	39	39	39	39	39	39	39	27	26	24	23	39	39	39	39
3314	26	23	23	23	23	23	23	23	23	23	23	23	23	23	16	16	16	16	23	23	23	23
3315	48	43	43	43	43	43	43	43	43	43	43	43	43	43	25	25	21	20	43	43	43	43
3416	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
3417	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
3418	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
3419	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43

Table L-24 (continued)

Estimated Changes in River Otter Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
3421	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49	49
3523	53	49	49	49	49	49	49	49	49	49	49	49	49	49	40	39	37	35	49	49	49	49
3524	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3525	67	53	53	53	53	53	53	53	53	53	53	53	53	53	37	37	34	31	53	53	53	53
3526	37	28	28	28	28	28	28	28	28	28	28	28	28	28	22	21	20	20	28	28	28	28
3551	48	43	43	43	43	43	43	43	43	43	43	43	43	43	38	37	33	32	43	43	43	43
3627	30	26	26	26	26	26	26	26	26	26	26	26	26	26	23	22	21	21	26	26	26	26
3628	26	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
3629	89	78	78	78	78	78	78	78	78	78	78	78	78	78	72	70	69	67	78	78	78	78
3630	42	42	42	42	42	42	42	42	42	42	42	42	42	42	28	27	26	25	42	42	42	42
3731	53	50	50	50	50	50	50	50	50	50	50	50	50	50	32	31	29	28	50	50	50	50
3732	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
3733	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
3734	98	98	98	98	98	98	98	98	98	98	98	98	98	98	85	85	85	85	98	98	98	98
3835	24	24	24	24	24	24	24	24	24	24	24	24	24	24	19	18	17	17	24	24	24	24
3836	43	43	43	43	43	43	43	43	43	43	43	43	43	43	30	27	27	26	43	43	43	43
3837	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3938	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
3939	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
3940	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
4041	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
4042	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
4043	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
4044	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
4054	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
4055	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
4145	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
4146	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
4147	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
4148	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
4149	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
4150	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
4222	60	57	57	57	57	57	57	57	57	57	57	57	57	57	57	56	55	55	57	57	57	57
4252	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	10	10	10	10
4253	51	40	40	40	40	40	40	40	40	40	40	40	40	40	28	26	25	24	40	40	40	40
4256	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
4302	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4408	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
4503	67	67	67	67	67	67	67	67	67	67	67	67	67	67	66	66	66	66	67	67	67	67

Table L-24 (continued)

Estimated Changes in River Otter Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
4505	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
4506	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
4508	65	65	65	65	65	65	65	65	65	65	65	65	65	65	64	64	64	64	65	65	65	65
4607	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5012	160	149	149	149	149	149	149	149	149	149	149	149	149	149	114	111	107	104	149	149	149	149
5013	75	74	74	74	74	74	74	74	74	74	74	74	74	74	47	47	39	35	74	74	74	74
5014	66	63	63	63	63	63	63	63	63	63	63	63	63	63	44	43	36	35	63	63	63	63
5015	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
5016	140	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139
5017	183	183	183	183	183	183	183	183	183	183	183	183	183	183	151	151	142	138	183	183	183	183
5018	52	49	49	49	49	49	49	49	49	49	49	49	49	49	40	40	36	33	49	49	49	49
5130	77	76	76	76	76	76	76	76	76	76	76	76	76	76	68	68	66	63	76	76	76	76
5131	67	66	66	66	66	66	66	66	66	66	66	66	66	66	59	59	58	55	66	66	66	66
5132	34	33	33	33	33	33	33	33	33	33	33	33	33	33	27	27	27	26	33	33	33	33
5133	83	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	79	77	81	81	81	81
5134	80	63	63	63	63	63	63	63	63	63	63	63	63	63	55	55	52	50	63	63	63	63
5135	22	22	22	22	22	22	22	22	22	22	22	22	22	22	20	20	20	19	22	22	22	22
5136	36	32	32	32	32	32	32	32	32	32	32	32	32	32	27	27	25	24	32	32	32	32
5137	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
5138	34	32	32	32	32	32	32	32	32	32	32	32	32	32	31	30	28	26	32	32	32	32

Table L-25

Estimated Changes in River Otter Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means otters are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96	100	100	100	100
303	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	91	91	91	91	91	91	91	91	91	91	91	91	91	78	76	73	60	91	91	91	91
406	88	88	88	88	88	88	88	88	88	88	88	88	88	102	98	97	68	88	88	88	88
407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
509	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	93	98	98	98	98
510	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	61	80	80	80	80
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	97	97	97	97	97	97	97	97	97	97	97	97	97	95	95	93	81	97	97	97	97
613	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	95	97	97	97	97
614	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
715	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
901	98	98	98	98	98	98	98	98	98	98	98	98	98	86	84	71	63	98	98	98	98
902	100	100	100	100	100	100	100	100	100	100	100	100	100	96	96	94	94	100	100	100	100
1003	83	83	83	83	83	83	83	83	83	83	83	83	83	95	88	85	30	83	83	83	83
1105	99	99	99	99	99	99	99	99	99	99	99	99	99	64	63	55	48	99	99	99	99
1106	100	100	100	100	100	100	100	100	100	100	100	100	100	29	21	7	7	100	100	100	100
1107	96	96	96	96	96	96	96	96	96	96	96	96	96	83	78	61	57	96	96	96	96
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	100	100	100	100	100	100	100	100	100	100	100	67	64	51	49	100	100	100	100
1210	100	100	100	100	100	100	100	100	100	100	100	100	100	72	70	48	43	100	100	100	100
1211	98	98	98	98	98	98	98	98	98	98	98	98	98	74	72	66	43	98	98	98	98
1212	100	100	100	100	100	100	100	100	100	100	100	100	100	80	80	80	80	100	100	100	100

Table L-25 (continued)

Estimated Changes in River Otter Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means otters are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1213	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	94	97	97	97	97
1214	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	62	92	92	92	92
1315	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	52	74	74	74	74
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	44	46	46	46	46
1318	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	121	96	96	96	96	96
1319	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
1323	98	98	98	98	98	98	98	98	98	98	98	98	98	72	72	66	62	98	98	98	98
1332	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	74	87	87	87	87
1420	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
1421	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82	82
1422	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	48	91	91	91	91
1526	92	92	92	92	92	92	92	92	92	92	92	92	92	92	91	88	77	92	92	92	92
1527	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	58	85	85	85	85
1528	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
1529	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
1530	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	47	83	83	83	83
1531	85	85	85	85	85	85	85	85	85	85	85	85	85	60	57	46	22	85	85	85	85
1601	100	100	100	100	100	100	100	100	100	100	100	100	100	93	93	81	78	100	100	100	100
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	96	96	88	84	100	100	100	100
1603	93	93	93	93	93	93	93	93	93	93	93	93	93	74	74	70	70	93	93	93	93
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	79	79	79	79	79	79	79	79	79	79	79	79	79	79	76	74	69	79	79	79	79
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	95	100	100	100	100
1811	97	97	97	97	97	97	97	97	97	97	97	97	97	89	89	84	84	97	97	97	97
1812	100	100	100	100	100	100	100	100	100	100	100	100	100	95	95	95	95	100	100	100	100
1813	55	55	55	55	55	55	55	55	55	55	55	55	55	52	52	52	52	55	55	55	55
1814	96	96	96	96	96	96	96	96	96	96	96	96	96	88	88	85	85	96	96	96	96
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	100	100	100	100	100	100	100	100	100	100	100	100	70	70	60	55	100	100	100	100

Table L-25 (continued)

Estimated Changes in River Otter Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means otters are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1817	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100
1901	96	96	96	96	96	96	96	96	96	96	96	96	96	61	54	50	47	96	96	96	96
1902	94	94	94	94	94	94	94	94	94	94	94	94	94	35	35	24	24	94	94	94	94
1903	100	100	100	100	100	100	100	100	100	100	100	100	100	73	69	62	56	100	100	100	100
1904	85	85	85	85	85	85	85	85	85	85	85	85	85	42	30	27	24	85	85	85	85
1905	84	84	84	84	84	84	84	84	84	84	84	84	84	59	53	51	51	84	84	84	84
1906	90	90	90	90	90	90	90	90	90	90	90	90	90	35	35	15	18	90	90	90	90
1910	99	99	99	99	99	99	99	99	99	99	99	99	99	86	85	84	83	99	99	99	99
2007	94	94	94	94	94	94	94	94	94	94	94	94	94	79	72	69	66	94	94	94	94
2008	100	100	100	100	100	100	100	100	100	100	100	100	100	57	57	50	50	100	100	100	100
2202	83	83	83	83	83	83	83	83	83	83	83	83	83	79	79	79	79	83	83	83	83
2203	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
2304	80	80	80	80	80	80	80	80	80	80	80	80	80	68	68	68	68	80	80	80	80
2305	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	98	100	100	100	100
2306	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	79	79	83	83	83	83
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	100	100	100	100	100	100	100	91	87	87	87	100	100	100	100
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	95	95	95	95	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	100	100	100	100	100	100	100	100	100	100	81	81	75	75	100	100	100	100
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	100	100	100	100	100	100	100	100	100	100	88	88	76	80	100	100	100	100
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	17	17	17	17	100	100	100	100
2722	100	100	100	100	100	100	100	100	100	100	100	100	100	89	89	89	89	100	100	100	100
2823	100	100	100	100	100	100	100	100	100	100	100	100	100	71	70	70	70	100	100	100	100
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	81	75	75	75	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	100	100	100	100	100	100	100	100	100	100	100	100	98	97	91	84	100	100	100	100
2927	100	100	100	100	100	100	100	100	100	100	100	100	100	95	93	92	92	100	100	100	100
3001	76	76	76	76	76	76	76	76	76	76	76	76	76	42	42	41	41	76	76	76	76

Table L-25 (continued)

Estimated Changes in River Otter Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means otters are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3002	63	63	63	63	63	63	63	63	63	63	63	63	63	47	47	47	47	63	63	63	63
3003	96	96	96	96	96	96	96	96	96	96	96	96	96	56	56	56	54	96	96	96	96
3104	84	84	84	84	84	84	84	84	84	84	84	84	84	63	63	63	63	84	84	84	84
3105	100	100	100	100	100	100	100	100	100	100	100	100	100	95	95	95	95	100	100	100	100
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	88	88	88	88	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	63	63	63	63	63	63	63	63	63	63	63	63	63	50	47	44	42	63	63	63	63
3309	100	100	100	100	100	100	100	100	100	100	100	100	100	93	89	89	86	100	100	100	100
3310	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
3311	96	96	96	96	96	96	96	96	96	96	96	96	96	70	68	66	66	96	96	96	96
3312	88	88	88	88	88	88	88	88	88	88	88	88	88	44	44	44	44	88	88	88	88
3313	56	56	56	56	56	56	56	56	56	56	56	56	56	39	37	34	33	56	56	56	56
3314	88	88	88	88	88	88	88	88	88	88	88	88	88	62	62	62	62	88	88	88	88
3315	90	90	90	90	90	90	90	90	90	90	90	90	90	52	52	44	42	90	90	90	90
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3417	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3523	92	92	92	92	92	92	92	92	92	92	92	92	92	75	74	70	66	92	92	92	92
3524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3525	79	79	79	79	79	79	79	79	79	79	79	79	79	55	55	51	46	79	79	79	79
3526	76	76	76	76	76	76	76	76	76	76	76	76	76	59	57	54	54	76	76	76	76
3551	90	90	90	90	90	90	90	90	90	90	90	90	90	79	77	69	67	90	90	90	90
3627	87	87	87	87	87	87	87	87	87	87	87	87	87	77	73	70	70	87	87	87	87
3628	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
3629	88	88	88	88	88	88	88	88	88	88	88	88	88	81	79	78	75	88	88	88	88
3630	100	100	100	100	100	100	100	100	100	100	100	100	100	67	64	62	60	100	100	100	100
3731	94	94	94	94	94	94	94	94	94	94	94	94	94	60	58	55	53	94	94	94	94
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	87	87	87	87	100	100	100	100
3835	100	100	100	100	100	100	100	100	100	100	100	100	100	79	75	71	71	100	100	100	100
3836	100	100	100	100	100	100	100	100	100	100	100	100	100	70	63	63	60	100	100	100	100
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-25 (continued)

Estimated Changes in River Otter Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means otters are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	95	95	95	95	95	95	95	95	95	95	95	95	95	95	93	92	92	95	95	95	95
4252	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	90	90	100	100	100	100
4253	78	78	78	78	78	78	78	78	78	78	78	78	78	55	51	49	47	78	78	78	78
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	100	100	100	100	100	100	100	100	100	100	100	100	100	98	98	98	98	100	100	100	100
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	93	93	93	93	93	93	93	93	93	93	93	93	93	71	69	67	65	93	93	93	93
5013	99	99	99	99	99	99	99	99	99	99	99	99	99	63	63	52	47	99	99	99	99
5014	95	95	95	95	95	95	95	95	95	95	95	95	95	67	65	55	53	95	95	95	95
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
5017	100	100	100	100	100	100	100	100	100	100	100	100	100	83	83	78	75	100	100	100	100
5018	94	94	94	94	94	94	94	94	94	94	94	94	94	77	77	69	63	94	94	94	94

Table L-25 (continued)

Estimated Changes in River Otter Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means otters are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5130	99	99	99	99	99	99	99	99	99	99	99	99	99	88	88	86	82	99	99	99	99
5131	99	99	99	99	99	99	99	99	99	99	99	99	99	88	88	87	82	99	99	99	99
5132	97	97	97	97	97	97	97	97	97	97	97	97	97	79	79	79	76	97	97	97	97
5133	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	95	93	98	98	98	98
5134	79	79	79	79	79	79	79	79	79	79	79	79	79	69	69	65	63	79	79	79	79
5135	100	100	100	100	100	100	100	100	100	100	100	100	100	91	91	91	86	100	100	100	100
5136	89	89	89	89	89	89	89	89	89	89	89	89	89	75	75	69	67	89	89	89	89
5137	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5138	94	94	94	94	94	94	94	94	94	94	94	94	94	91	88	82	76	94	94	94	94

Table L-26
Number of River Otter Harvested (data are not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
101	5	1	4	8	12	17	3	3	101			
303	10	0	8	0	0	0	21	0	303			
404	0	5	0	0	0	0	0	0	404			
405	6	5	10	13	0	0	7	5	405			
406	0	15	0	0	3	4	7	10	406			
407	4	7	4	6	4	9	2	7	407			
408	3	3	0	0	1	0	6	6	408			
509	10	0	1	12	1	4	0	2	509			
510	11	1	10	4	6	5	1	8	510			
511	2	0	0	0	0	0	0	2	511			
612	5	0	4	0	1	0	1	0	612			
613	5	2	1	1	3	5	12	6	613			
614	0	0	0	0	0	0	0	0	614			
715	11	6	6	0	19	0	0	12	715			
716	2	9	0	0	0	12	0	0	716			
717	0	0	0	0	0	0	0	0	717			
718	0	0	0	0	0	0	0	0	718			
719	0	0	0	1	0	4	2	0	719			
820	0	0	0	2	0	0	0	2	820			
821	1	0	0	0	0	0	0	0	821			
822	24	1	1	5	4	0	7	0	822			
823	25	7	0	2	0	5	0	0	823			
824	0	0	0	0	0	0	0	0	824			
825	0	0	0	0	0	0	0	0	825			
826	0	0	0	0	0	0	0	0	826			
GMU 1A	124	62	49	54	54	65	69	63				
901	11	1	0	0	0	0	0	0	901			
902	0	8	0	0	14	0	0	0	902			
1003	0	0	0	2	5	0	0	0	1003			
1104	0	0	1	0	0	0	0	0				
1105	29	0	0	0	2	4	10	0	1105			
1106	21	0	3	3	0	4	1	0	1106			
1107	27	0	0	0	2	30	13	2	1107			
1108	0	3	0	0	0	5	0	0	1108			
1209	0	0	0	1	2	0	0	0	1209			
1210	0	0	0	2	2	1	1	0	1210			
1211	4	4	9	15	8	1	0	1	1211			
1212	6	5	5	10	4	0	0	0	1212			
1213	2	4	4	8	4	0	0	0	1213			
1214	10	7	4	21	3	8	0	0	1214			
1315	20	1	4	6	13	10	4	0	1315			
1316	0	0	0	0	0	0	0	0	1316			
1317	7	2	3	0	5	8	4	7	1317			
1318	18	17	6	7	21	68	22	10	1318			
1318									1332			
1318									1323			
1319	1	9	4	0	2	3	11	2	1319			
1420	6	3	0	0	0	12	5	0	1420			
1421	4	4	9	19	0	6	2	0	1421			
1422	14	24	0	0	11	18	1	0	1422			
1422									1531			
1524	0	0	0	0	0	0	0	0	1524			
1525	0	0	1	9	1	1	19	14	1525			
1526	0	9	0	2	41	0	3	6	1526			

Table L-26 (continued)
Number of River Otter Harvested (data are not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
1527	32	30	37	9	5	2	38	15	1527			
1527									1530			
1528	8	1	2	0	3	3	5	3	1528			
1529	14	6	18	4	0	5	2	2	1529			
GMU 2	234	138	110	118	148	189	141	62				
1601	0	4	0	0	0	0	0	0	1601			
1602	0	3	0	0	2	0	0	1	1602			
1603	9	5	1	2	1	2	0	1	1603			
1604	0	0	4	0	0	0	0	0	1604			
1605	0	1	3	1	0	0	5	5	1605			
1706	0	2	1	0	1	0	0	0	1706			
1707	0	1	8	0	0	1	0	0	1707			
1708	0	1	0	0	0	0	1	1	1708			
1810	6	0	0	0	0	0	0	1	1810			
1811	4	7	6	5	8	0	1	0	1811			
1812	3	2	0	0	0	1	0	0	1812			
1813	5	3	0	0	0	0	0	0	1813			
1814	1	1	2	5	0	1	0	0	1814			
1815	0	1	0	0	0	0	0	0	1815			
1816	0	0	0	0	1	0	0	0	1816			
1817	0	2	2	9	0	9	1	0	1817			
GMU 1B	28	33	27	22	13	14	8	9				
1901	7	20	32	0	7	0	0	0	1901			
1901									1910			
1902	0	0	0	0	0	0	0	0	1902			
1903	8	2	4	2	1	9	0	2	1903			
1904	2	16	1	8	0	25	0	0	1904			
1905	0	0	0	0	0	0	0	0	1905			
1906	0	24	0	34	0	42	0	0	1906			
2007	9	5	3	4	6	13	2	11	2007			
2008	0	0	2	8	12	8	10	4	2008			
2009	2	4	15	1	11	0	1	4	5136			
2009									5137			
2009									5138			
2010	2	2	4	4	0	4	16	16	5130			
2010									5133			
2010									5134			
2011	5	4	4	2	0	0	3	3	5131			
2011									5132			
2011									5135			
2012	5	3	0	1	6	3	10	3	5012			
2013	3	1	0	0	3	19	7	0	5013			
2014	11	9	11	3	0	18	2	2	5014			
2014									5016			
2014									5017			
2014									5018			
2015	0	0	0	0	0	0	0	0	5015			
GMU 3	54	90	76	67	46	141	51	45				
2202	0	0	0	3	3	2	0	2	2202			
2203	0	0	0	0	4	0	0	0	2203			
2304	0	3	1	0	0	1	2	2	2304			
2305	0	0	0	1	0	0	16	1	2305			

Table L-26 (continued)
Number of River Otter Harvested (data are not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
2306	5	9	2	0	0	0	0	0	2306			
2307	0	0	0	0	0	0	0	0	2307			
2408	0	0	0	0	0	0	0	0	2408			
2409	2	5	2	7	8	4	2	3	2409			
2410	0	0	0	0	0	0	1	0	2410			
2411	0	0	0	0	0	0	0	0	2411			
2412	0	0	0	0	0	0	0	0	2412			
2413	0	0	0	0	0	0	0	0	2413			
2514	6	0	8	3	2	0	1	0	2514			
2515	4	1	0	4	13	9	1	10	2515			
2516	0	0	0	0	0	0	0	0	2516			
2517	3	2	0	0	1	0	0	0	2517			
2518	0	0	0	0	2	1	1	0	2518			
2519	0	0	0	0	0	0	0	0	2519			
2620	0	0	0	0	1	0	0	0	2620			
2621	3	0	0	3	2	1	0	1	2621			
2722	10	2	0	2	0	1	1	3	2722			
2823	0	0	8	0	0	8	1	3	2823			
2824	0	0	0	0	0	0	0	0	2824			
2825	0	0	0	0	1	1	0	0	2825			
2926	4	0	6	1	0	1	0	5	2926			
2927	0	12	0	0	1	0	9	0	2927			
GMU 1C	37	34	27	24	38	29	35	30				
3000	6	5	2	52	0	13	0	0	3000			
3001	6	9	8	9	10	21	13	33	3001			
3001									3314			
3002	7	2	5	2	1	10	3	2	3002			
3003	8	6	3	3	1	7	1	1	3003			
3031	0	0	0	0	0	0	1	0				
3100	0	0	3	2	0	0	0	0				
3104	5	5	2	0	0	1	1	1	3104			
3105	1	0	0	0	0	0	0	0	3105			
3200	1	0	0	0	0	0	0	0				
3206	5	0	3	1	0	8	0	1	3206			
3207	1	1	0	0	0	2	0	3	3207			
3300	14	14	7	0	32	0	0	17	3300			
3305	0	0	0	0	0	0	3	0				
3308	0	2	4	4	0	1	4	1	3308			
3309	0	0	0	0	1	3	0	0	3309			
3310	1	4	16	10	0	3	3	4	3310			
3311	11	12	12	3	0	5	1	3	3311			
3312	2	1	5	0	3	2	2	1	3312			
3313	0	1	1	15	1	10	0	2	3313			
3315	6	4	0	3	6	2	2	0	3315			
3400	10	23	7	0	0	0	0	0	3400			
3416	1	24	3	0	0	0	0	0	3416			
3417	0	6	2	0	3	0	2	0	3417			
3418	0	0	0	0	0	3	0	0	3418			
3419	13	2	0	0	4	5	3	3	3419			
3419									3421			
3420	0	0	0	0	0	0	0	0	3420			
3521	1	0	0	0	0	0	1	0	4256			
3522	0	0	0	0	0	1	0	0	4222			
3523	16	0	4	0	4	8	5	9	3523			

Table L-26 (continued)
Number of River Otter Harvested (data are not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
3524	0	0	0	0	0	0	0	1	3524			
3523									4252			
3523									4253			
3600	18	0	28	11	0	0	55	0				
3625	13	6	11	4	3	0	7	0	3525			
3625									3551			
3626	0	1	0	0	0	0	3	0	3526			
3627	0	0	0	0	0	2	0	1	3627			
3628	0	0	0	0	0	0	0	0	3628			
3629	0	1	0	0	0	7	0	1	3629			
3630	0	0	0	0	0	6	0	2	3630			
3703	0	0	10	1	0	3	0	0				
3731	0	0	0	0	17	4	0	2	3731			
3732	0	0	0	0	0	4	0	0	3732			
3733	0	0	0	1	3	2	0	0	3733			
3734	0	0	2	3	0	6	3	2	3734			
3835	3	0	0	0	0	0	0	0	3835			
3836	0	0	6	0	3	8	1	2	3836			
3837	0	0	0	0	1	1	1	0	3837			
3938	0	8	0	0	12	0	14	21	3938			
3939	4	6	18	7	2	17	8	3	3939			
3940	0	8	0	5	0	0	0	0	3940			
4000	0	0	0	0	0	0	0	13	4000			
4041	4	0	0	0	0	0	0	1	4041			
4041									4055			
4042	0	17	0	23	0	0	0	0	4042			
4042									4054			
4043	0	0	0	0	0	0	0	0	4043			
4044	0	0	0	0	0	0	0	0	4044			
4100	15	0	17	0	0	0	0	0	4100			
4145	0	0	5	0	2	0	0	0	4145			
4146	0	0	0	0	0	1	0	0	4146			
4147	0	0	0	4	4	0	4	9	4147			
4147									4150			
4148	0	0	0	1	0	1	1	0	4148			
4148									4149			
GMU 4	172	168	184	164	113	167	142	139				
4503	2	2	4	1	2	1	3	2	4503			
4503									4508			
4504	0	0	0	0	0	0	0	0	4504			
4505	0	0	0	0	0	0	0	0	4505			
4506	0	0	0	0	0	0	0	0	4506			
4607	0	0	0	0	0	0	0	0	4607			
GMU 5A	2	2	4	1	2	1	3	2				
Unknown	1	4	0	0	16	2	0	22				
G.Total	652	533	477	450	430	610	449	373				

Table L-27

Estimated Changes in Red Squirrel Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	24338	23916	23989	23923	23937	23817	23927	23861	23875	23755	24028	23961	23866	23856	23927	23861	23765	23755	23930	23864	23768	23758
303	24446	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048	24048
404	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527	119527
405	33741	32817	32866	32015	31674	31690	32866	31932	31530	31548	32085	31892	31685	31791	32164	31085	31017	31147	32290	31734	31597	31702
406	75539	72448	73063	71055	70263	70262	72299	70612	68871	68863	70951	70217	69445	69688	71126	68548	68225	67997	71884	69771	69322	69032
407	25869	25762	25735	25725	25559	25506	25766	25690	24921	24757	25812	25779	25012	24840	25425	25306	24721	24517	25790	25827	25058	24888
408	9677	9569	9810	9803	9692	9656	9851	9842	9746	9726	9864	9861	9787	9771	9861	9839	9728	9689	9853	9856	9782	9765
509	43445	42688	42686	42143	41412	41030	42902	42951	42071	41832	43139	42973	42308	42188	42383	42087	41618	41197	43111	42702	42044	41605
510	109012	100182	96606	92472	91647	90180	94674	95755	92149	90840	93910	92008	90850	90970	89335	87526	86367	83106	96262	91834	91103	87967
511	25160	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124	25124
612	61221	60825	56992	57064	53607	56734	56707	56780	51782	56264	56055	56099	50399	55584	55489	55495	54788	54990	55726	55891	52502	55394
613	29405	28988	29035	29041	28760	29014	29032	29038	28632	28996	29097	29122	25775	28821	29062	29063	28947	28980	28832	28928	26963	28639
614	8707	8707	8611	8611	8013	8515	8606	8606	8042	8511	8721	8721	7166	8532	8632	8632	8519	8534	8613	8634	7278	8441
715	83665	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521	83521
716	121548	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308	121308
717	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106	55106
718	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448	48448
719	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898	72898
820	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434	37434
821	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415	58415
822	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710	199710
823	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288	113288
824	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629	45629
825	48474	48474	48474	48474	48474	48474	48474	48474	48474	48474	48474	48474	48474	48474	48482	48482	48467	48482	48474	48474	48474	48474
826	16288	16288	16288	16288	16288	16288	16288	16288	16288	16288	15501	15364	13460	15237	15524	15706	14422	15553	16734	16623	15197	16246
901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1212	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1214	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-27 (continued)

Estimated Changes in Red Squirrel Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1316	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1317	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1323	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1332	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1422	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1527	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1528	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1529	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1601	29870	29870	29730	29874	25481	27765	29755	29894	25632	27789	29642	29822	24312	26746	29451	29595	24927	27318	29986	29398	25136	27225
1602	46657	46573	46573	46573	46573	46573	46573	46573	46573	46573	46573	46573	46573	46573	46493	46567	42390	44446	47515	47515	43536	45072
1603	28382	28041	26986	27030	26428	26229	26919	26763	25996	26202	26636	26391	25453	25678	26571	26318	25426	25591	26744	26794	26136	26055
1604	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579	4579
1605	37306	34588	35046	35149	33730	33263	35852	35296	32577	33308	35408	34781	32366	32946	35380	34681	32218	32675	35216	35382	33193	32924
1706	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684	15684
1707	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150	34150
1708	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154	76154
1809	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785	18785
1810	25751	25751	25546	24266	23283	24568	25868	25791	23214	23351	26907	27130	23241	22724	26376	26549	23645	22955	27568	27473	24016	23633
1811	31549	31465	31194	30468	29911	30640	31363	31328	30134	30197	31716	31832	29801	29531	31362	31446	30033	29698	32003	31968	30702	30561
1812	38671	38487	38529	38392	37759	38067	38488	38249	37905	38151	38745	38530	37360	37730	38693	38645	37785	37960	38099	38032	37471	37829
1813	55424	52253	52253	52253	52253	52253	52253	52253	52253	52253	51933	51810	49534	50490	53073	53032	51755	51959	52765	52765	49475	51267
1814	31841	31596	31628	31327	30421	31132	31677	31162	30496	31206	31899	31850	30687	31064	31869	31805	30558	30814	31118	31181	30687	31064
1815	23356	23312	23313	23311	23306	23310	23312	23309	23305	23309	23315	23315	23309	23311	23316	23315	23309	23310	23311	23311	23309	23311
1816	20809	20809	19953	19044	17885	19316	20816	20598	19305	19938	20383	20176	18658	19471	20179	20004	18160	19176	20084	20005	18675	19693
1817	45416	45416	43345	43345	40525	42892	43368	43368	40690	42915	43872	43872	36384	42963	43292	43292	42722	42799	43440	43536	37600	42689
1901	83448	81729	77876	76911	69573	73099	73000	73643	68051	70728	74541	71354	64559	72429	73973	68389	63449	71799	78041	76977	65578	71127
1902	6924	6712	6255	5861	5359	5979	6628	6533	5974	6248	6486	6392	5707	6074	6385	6286	5244	5819	6314	6276	5645	6128

Table L-27 (continued)
Estimated Changes in Red Squirrel Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1903	77198	74489	74488	74340	67993	67689	73827	71433	66987	67688	73119	68039	62363	63837	71086	67225	62351	61335	73738	69005	63226	64717
1904	20486	18619	18388	17878	17683	17090	18550	18024	17761	17286	18488	17590	16266	16051	17575	15475	14708	14120	18451	17599	15909	16365
1905	81030	73319	72803	68504	63538	64083	72803	63266	58154	63257	71529	61886	55635	61396	69307	59094	54528	57976	72979	62775	56666	62165
1906	11499	9768	8597	8448	8329	8041	9428	9377	9206	8200	9407	9176	8281	7968	9029	8642	5094	7285	9792	9792	9139	8575
1910	67837	67665	67187	67073	66212	66626	66691	66762	66141	66439	66709	66311	65463	66445	66411	65569	64825	66083	67157	67029	65664	66328
2007	78989	72176	73441	69738	65104	65309	72714	65625	62490	64160	72346	64044	60654	61205	73044	63067	59532	61914	73908	65964	62989	64251
2008	7693	7693	7693	7693	7693	7693	7607	7251	6538	6674	7327	7026	6235	6336	7600	7196	6397	6816	7336	7475	6651	6761
2202	16449	16041	16041	16041	16041	16041	14597	14597	14596	14586	10938	10938	10907	10576	15854	15854	15854	15847	12557	12557	12034	12230
2203	41343	40970	40947	40947	40947	40947	40946	40946	40946	40946	40325	40325	40320	40266	40970	40970	40970	40970	40465	40465	40356	40397
2304	26074	25728	24835	24835	24820	24817	24791	24791	24791	24785	24492	24492	24485	24410	23725	23808	22361	23806	24687	24687	24535	24592
2305	40757	40649	37989	37445	31107	37989	37989	37445	34181	37861	36567	36567	31407	36567	37786	37750	32244	37754	37110	37110	30237	36945
2306	21241	20373	19760	19031	14707	18874	19760	19031	16878	19303	19028	19028	15668	19028	19075	18995	14282	19193	18572	17952	14904	18216
2408	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527	8527
2409	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025	11025
2410	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698	11698
2411	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533	26533
2412	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989	6989
2413	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229	41229
2514	19671	19671	19891	19763	19711	19805	20336	19793	17989	20237	20125	20154	16251	20154	20319	19777	17843	20221	20345	20345	17692	20235
2515	37328	37328	37328	37328	37328	37328	37328	37328	37328	37328	37328	37328	37328	37328	37261	37253	36859	37246	37328	37328	37328	37328
2516	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370	3370
2517	19521	19521	20112	20123	19597	20123	19899	19911	19304	19911	19936	19936	19180	19936	19570	19567	17622	19563	19844	19844	18693	19844
2518	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169	59169
2519	31093	31093	32667	32692	31495	32692	32150	32174	30958	32174	32335	32335	30701	32335	31721	31721	28365	31721	32176	32176	29200	32176
2620	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1696	1508	1296	1351	1315	1696	1696	1696	1696
2621	3534	3534	3534	3534	3534	3534	3534	3534	3534	3534	3534	3534	3534	3534	3069	2415	2585	2474	3534	3534	3534	3534
2722	18599	18587	18713	18713	18455	18713	18713	18713	18449	18713	18760	18760	18571	18760	18723	18714	18282	18705	18760	18760	18710	18760
2823	123334	123334	107978	107654	107468	107535	108029	107522	107379	107436	91485	91485	91411	91411	90309	88900	89000	89000	91379	91379	91379	91379
2824	28036	28036	28044	28044	28044	28044	28044	28044	28044	28044	28028	28028	28028	28028	28157	27209	27419	28157	28028	28028	28028	28028
2825	52582	52582	52582	52582	52582	52582	52582	52582	52582	52582	52582	52582	52582	52582	52636	52631	52595	52634	52591	52583	52555	52585
2926	85604	85604	87193	86708	82322	83061	83759	83097	71578	78744	75508	75577	63927	70852	86879	86088	80090	86546	73196	71198	64152	71638
2927	82808	82808	83377	80133	79937	80523	83228	81944	79967	80207	71532	70704	55615	62548	83595	82217	78605	79887	73637	71674	58643	67967
3001	51802	48821	47609	47655	46857	47341	46306	46361	45325	45791	36597	34968	34684	35644	37397	37469	37121	36987	40091	40121	40063	39771
3002	29554	27342	26755	26783	25896	26520	26154	26181	25449	25867	25019	24653	24613	24812	25009	25037	24781	24920	26743	26752	26752	26659
3003	31763	31133	27714	27784	26882	27399	27062	27132	25975	26724	23250	22404	22412	22702	24593	24689	24485	24269	25578	25578	25371	25073
3104	45626	42250	42120	42234	41306	41317	41608	41725	40662	40662	34348	32546	31794	33666	34521	34396	34330	33913	35930	35185	34622	34087
3105	36010	35962	34790	34790	34717	34790	35118	35118	35045	35118	30745	30723	30728	30745	30134	30134	30091	30134	34821	34821	34821	34821
3206	22635	22635	22635	22635	22635	22635	22635	22635	22635	22635	22595	22595	22595	22595	18774	18774	18774	18774	22595	22595	22595	22595

Table L-27 (continued)

Estimated Changes in Red Squirrel Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3207	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765	45765
3308	86790	78427	74726	72418	69357	72607	72824	72281	68140	69791	64700	64933	61660	61299	74383	70500	63652	64887	69868	65191	62623	62140
3309	24865	24865	25025	24371	24175	24448	23991	23336	23086	23179	22321	21277	20964	21421	24956	24143	23742	24068	21070	21230	20993	21087
3310	40358	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627	39627
3311	35913	35626	35626	35626	35626	35626	31621	31821	31222	31251	30639	29593	28633	29830	28453	28022	27479	27317	29481	29889	28606	29800
3312	12819	12708	11336	11374	10724	11118	11093	11124	10621	10822	9816	9466	9424	9590	8891	8937	8853	8799	9634	9674	9674	9588
3313	52516	47878	38827	39151	34480	35626	38828	39152	34648	37226	32551	33854	33426	32491	37517	35285	31658	30908	37263	35186	33545	31996
3314	24825	24297	22504	22556	21663	22204	22165	22208	21512	21790	18143	17375	17282	17646	16964	17055	16889	16781	17910	17996	17996	17811
3315	33249	32245	26280	25888	24471	24507	24955	25588	24140	24602	25950	26125	24722	25553	26109	25885	22445	21267	26726	25217	24519	24278
3416	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786	35786
3417	71040	71040	71040	71040	71040	71040	71040	71040	71040	71040	70495	70495	70495	70495	71040	71040	71040	71040	71040	71040	71040	71040
3418	34725	34725	34725	34725	34725	34725	34725	34725	34725	34725	31754	31754	31754	31754	34725	34725	34725	34725	34725	34725	34725	34725
3419	39192	39192	39192	39192	39192	39192	39192	39192	39192	39192	38250	38250	38250	38250	39192	39192	39192	39192	39192	39192	39192	39192
3420	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360	27360
3421	27844	27844	27545	27545	27349	27545	27844	27844	27844	27844	26855	26855	26855	26855	27869	27869	27829	27869	27804	27804	27804	27804
3523	33450	32707	32692	32719	32588	32714	32748	32459	31711	32344	31987	30524	30203	30779	31012	31055	28222	30680	30210	27473	26485	27393
3524	8706	8706	8998	8890	7916	8635	8798	8688	7743	8640	8829	8620	7582	8579	8909	8721	7719	8691	7607	7696	7087	7633
3525	54184	50984	50997	51744	47695	51641	52453	51112	46418	51207	51587	46653	44499	47574	49849	50835	44400	50363	44156	41905	39449	41523
3526	28501	26878	26224	26443	25098	26382	26566	26176	24567	26075	23525	23672	22808	22873	25708	25727	23094	25278	25009	22125	20818	22199
3551	46730	44590	45575	44943	39196	43438	44504	43815	37914	43517	43268	41957	35474	41705	44424	42728	33709	42461	35630	36190	32380	35794
3627	23077	22050	21066	20481	19705	20529	20567	20429	19381	19799	18541	18597	17809	17722	20991	20144	18649	18918	19787	18659	18041	17924
3628	26989	26845	26867	26858	26850	26860	26845	26845	26845	26845	26816	26811	26805	26807	26837	26830	26819	26822	26819	26813	26810	26810
3629	62383	61100	61630	60699	60421	60809	59698	58324	57802	57995	57257	55581	55078	55812	61656	59397	57641	59211	48519	48958	44054	48538
3630	31058	31058	30968	31003	30983	30993	30558	30381	29987	30277	28534	27440	27495	27611	28347	28023	26455	27666	30020	27666	27541	27738
3731	42019	41406	38532	38353	37704	37720	37907	38200	37530	37744	36894	37013	36051	36621	36870	36710	34249	33408	39490	38951	38702	38617
3732	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944	24944
3733	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728	86728
3734	62925	62925	62925	62925	62925	62925	62925	62925	62925	62925	62925	62925	62925	62925	56634	56634	56634	56634	62925	62925	62925	62925
3835	20414	20414	21103	20868	20717	21181	20458	20242	20076	20529	21099	20857	17140	19745	20539	19516	19008	19872	17005	17005	15765	15919
3836	34811	34811	34849	34810	34785	34862	34710	34652	34606	34730	36090	35678	29348	33785	34967	32297	30972	33227	29504	29504	27556	27799
3837	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640	33640
3938	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368	61368
3939	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210	51210
3940	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797	44797
4041	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121	37121
4042	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750	45750
4043	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509	68509
4044	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383	33383
4054	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581	45581

Table L-27 (continued)

Estimated Changes in Red Squirrel Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4055	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680	50680
4145	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774	39774
4146	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694	32694
4147	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224	24224
4148	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108	28108
4149	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583	23583
4150	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824	16824
4222	60471	60134	60134	60134	60134	60134	61169	58963	57281	59417	60153	56496	54956	56127	59544	57820	56744	58044	56505	55951	53976	55884
4252	13181	13181	13181	13181	13181	13181	14191	12910	12004	13229	13556	11887	11413	11613	13545	11962	11750	12295	11876	11971	10945	11918
4253	28712	27523	27523	27523	27523	27523	28200	25969	24201	26421	26931	24385	23752	24054	26779	24148	23359	24579	24743	24534	22938	24462
4256	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581	13581
4302	3888	3612	3612	3612	3612	3612	3495	3495	3495	3495	2556	2556	2548	2458	3612	3612	3612	3612	2789	2789	2608	2676
4304	32	32	32	32	32	32	32	32	32	32	32	32	32	32	8	8	8	8	32	32	32	32
4407	12932	12932	12932	12932	12932	12932	12932	12932	12932	12932	12932	12932	12932	12932	12692	12692	12692	12692	12932	12932	12932	12932
4408	30045	30045	30045	30045	30045	30045	30045	30045	30045	30045	30045	30045	30045	30045	30022	30022	30022	30022	30045	30045	30045	30045
4503	181092	181092	181092	181092	181092	181092	181092	181092	181092	181092	181090	181091	181091	181091	180999	180981	180925	180947	181092	181092	181092	181092
4504	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387	1387
4505	59922	59869	60101	59907	59870	60067	59905	59855	59827	59862	59902	59893	59890	59891	59860	59872	59826	59807	59929	59929	59901	59922
4506	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536	23536
4508	174830	172738	178838	173287	172393	176843	171893	165637	162334	166535	173012	171483	168789	171146	161453	163271	154753	153976	173590	173590	169917	172772
4607	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887	13887
5012	121061	110617	109640	99905	94630	94952	105949	99208	91421	96172	97913	92598	84287	88871	97584	94163	85132	88911	98063	95325	90938	94170
5013	48341	48042	47543	46523	45036	45611	48211	47613	44592	44732	47490	47654	43131	43274	45557	45005	34313	37033	47366	46666	43264	43551
5014	32098	31630	31007	28856	25716	26930	32529	31401	25707	25970	31169	31405	24866	25074	31246	30658	23125	23297	30935	29902	24887	25311
5015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	52790	52610	52447	52334	52169	52232	52610	52610	52610	52610	52610	52610	52610	52610	52449	52426	52129	52135	52610	52610	52610	52610
5017	91333	91333	91340	91336	91330	91332	92352	92350	88144	89354	92273	92275	87446	88626	90444	90440	84300	86164	91255	91249	91218	91220
5018	32342	31758	31656	30752	29353	29930	32529	32053	29340	29688	31571	31665	29113	29208	31517	31311	26895	28333	31499	31098	29122	29301
5130	60148	59904	59193	59506	55289	59080	58974	59198	55584	59122	57821	57937	54204	57766	57998	58250	52955	57928	58048	57826	54108	57632
5131	49582	47273	45504	45720	41776	45297	44685	44945	41592	44943	43564	43689	40497	43585	44079	44333	39717	44069	44136	43887	40762	43744
5132	25730	23379	23916	24096	20587	23682	23587	23828	20641	23732	22781	22871	20169	22791	23041	23270	20242	23158	23119	22857	20201	22767
5133	71340	71112	71108	71109	71084	71107	70633	70633	65528	69865	69521	69521	63235	68637	69710	69710	64029	68831	69359	69475	63636	68613
5134	66796	64796	63228	63681	60439	63416	63842	63842	60822	63531	63712	63712	60877	63375	63479	63479	59665	63134	63309	63412	60558	63087
5135	29298	29298	29076	29134	26778	28634	28785	28902	26740	28214	28216	28211	26489	28162	28419	28633	26933	28553	28571	28132	26489	28068
5136	37490	35629	35251	35400	29387	34125	34678	34954	29859	33333	33314	33303	29169	33184	33280	33869	29210	33647	34161	33109	29171	32955
5137	31209	31209	31260	31260	30950	31260	31242	31242	30883	31242	31300	31300	30772	31300	31260	31260	30989	31260	31300	31300	30772	31300
5138	39082	37462	38329	38580	31839	37740	39364	38671	33634	36999	38763	38242	32870	36484	38963	38247	32995	36978	38202	38557	32959	36552

Table L-28

Estimated Changes in Red Squirrel Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means that red squirrels are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	98	99	98	98	98	98	98	98	98	99	98	98	98	98	98	98	98	98	98	98	98
303	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	97	97	95	94	94	97	95	93	94	95	95	94	94	95	92	92	92	96	94	94	94
406	96	97	94	93	93	96	93	91	91	94	93	92	92	94	91	90	90	95	92	92	91
407	100	99	99	99	99	100	99	96	96	100	100	97	96	98	98	96	95	100	100	97	96
408	99	101	101	100	100	102	102	101	101	102	102	101	101	102	102	101	100	102	102	101	101
509	98	98	97	95	94	99	99	97	96	99	99	97	97	98	97	96	95	99	98	97	96
510	92	89	85	84	83	87	88	85	83	86	84	83	83	82	80	79	76	88	84	84	81
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	99	93	93	88	93	93	93	85	92	92	92	82	91	91	91	89	90	91	91	86	90
613	99	99	99	98	99	99	99	97	99	99	99	88	98	99	99	98	99	98	98	92	97
614	100	99	99	92	98	99	99	92	98	100	100	82	98	99	99	98	98	99	99	84	97
715	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	95	94	83	94	95	96	89	95	103	102	93	100
901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
902	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-28 (continued)

Estimated Changes in Red Squirrel Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means that red squirrels are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1316	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1317	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1323	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1422	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1528	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1601	100	100	100	85	93	100	100	86	93	99	100	81	90	99	99	83	91	100	98	84	91
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	91	95	102	102	93	97
1603	99	95	95	93	92	95	94	92	92	94	93	90	90	94	93	90	90	94	94	92	92
1604	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1605	93	94	94	90	89	96	95	87	89	95	93	87	88	95	93	86	88	94	95	89	88
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	99	94	90	95	100	100	90	91	104	105	90	88	102	103	92	89	107	107	93	92
1811	100	99	97	95	97	99	99	96	96	101	101	94	94	99	100	95	94	101	101	97	97
1812	100	100	99	98	98	100	99	98	99	100	100	97	98	100	100	98	98	99	98	97	98
1813	94	94	94	94	94	94	94	94	94	94	93	89	91	96	96	93	94	95	95	89	92
1814	99	99	98	96	98	99	98	96	98	100	100	96	98	100	100	96	97	98	98	96	98
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	96	92	86	93	100	99	93	96	98	97	90	94	97	96	87	92	97	96	90	95
1817	100	95	95	89	94	95	95	90	94	97	97	80	95	95	95	94	94	96	96	83	94
1901	98	93	92	83	88	87	88	82	85	89	86	77	87	89	82	76	86	94	92	79	85

Table L-28 (continued)

Estimated Changes in Red Squirrel Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means that red squirrels are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1902	97	90	85	77	86	96	94	86	90	94	92	82	88	92	91	76	84	91	91	82	89
1903	96	96	96	88	88	96	93	87	88	95	88	81	83	92	87	81	79	96	89	82	84
1904	91	90	87	86	83	91	88	87	84	90	86	79	78	86	76	72	69	90	86	78	80
1905	90	90	85	78	79	90	78	72	78	88	76	69	76	86	73	67	72	90	77	70	77
1906	85	75	73	72	70	82	82	80	71	82	80	72	69	79	75	44	63	85	85	79	75
1910	100	99	99	98	98	98	98	97	98	98	98	97	98	98	97	96	97	99	99	97	98
2007	91	93	88	82	83	92	83	79	81	92	81	77	77	92	80	75	78	94	84	80	81
2008	100	100	100	100	100	99	94	85	87	95	91	81	82	99	94	83	89	95	97	86	88
2202	98	98	98	98	98	89	89	89	89	66	66	66	64	96	96	96	96	76	76	73	74
2203	99	99	99	99	99	99	99	99	99	98	98	98	97	99	99	99	99	98	98	98	98
2304	99	95	95	95	95	95	95	95	95	94	94	94	94	91	91	86	91	95	95	94	94
2305	100	93	92	76	93	93	92	84	93	90	90	77	90	93	93	79	93	91	91	74	91
2306	96	93	90	69	89	93	90	79	91	90	90	74	90	90	89	67	90	87	85	70	86
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	101	100	100	101	103	101	91	103	102	102	83	102	103	101	91	103	103	103	90	103
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	100	100	100	100	100
2516	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2517	100	103	103	100	103	102	102	99	102	102	102	98	102	100	100	90	100	102	102	96	102
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	105	105	101	105	103	103	100	103	104	104	99	104	102	102	91	102	103	103	94	103
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	89	76	80	78	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	87	68	73	70	100	100	100	100
2722	100	101	101	99	101	101	101	99	101	101	101	100	101	101	101	98	101	101	101	101	101
2823	100	88	87	87	87	88	87	87	87	74	74	74	74	73	72	72	72	74	74	74	74
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	97	98	100	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	102	101	96	97	98	97	84	92	88	88	75	83	101	101	94	101	86	83	75	84
2927	100	101	97	97	97	101	99	97	97	86	85	67	76	101	99	95	96	89	87	71	82
3001	94	92	92	90	91	89	89	87	88	71	68	67	69	72	72	72	71	77	77	77	77
3002	93	91	91	88	90	88	89	86	88	85	83	83	84	85	85	84	84	90	91	91	90
3003	98	87	87	85	86	85	85	82	84	73	71	71	71	77	78	77	76	81	81	80	79
3104	93	92	93	91	91	91	91	89	89	75	71	70	74	76	75	75	74	79	77	76	75

Table L-28 (continued)

Estimated Changes in Red Squirrel Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means that red squirrels are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3105	100	97	97	96	97	98	98	97	98	85	85	85	85	84	84	84	84	97	97	97	97
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	83	83	83	83	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	90	86	83	80	84	84	83	79	80	75	75	71	71	86	81	73	75	81	75	72	72
3309	100	101	98	97	98	96	94	93	93	90	86	84	86	100	97	95	97	85	85	84	85
3310	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
3311	99	99	99	99	99	88	89	87	87	85	82	80	83	79	78	77	76	82	83	80	83
3312	99	88	89	84	87	87	87	83	84	77	74	74	75	69	70	69	69	75	75	75	75
3313	91	74	75	66	68	74	75	66	71	62	64	64	62	71	67	60	59	71	67	64	61
3314	98	91	91	87	89	89	89	87	88	73	70	70	71	68	69	68	68	72	72	72	72
3315	97	79	78	74	74	75	77	73	74	78	79	74	77	79	78	68	64	80	76	74	73
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3417	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	91	91	91	91	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	98	98	98	98	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	99	99	98	99	100	100	100	100	96	96	96	96	100	100	100	100	100	100	100	100
3523	98	98	98	97	98	98	97	95	97	96	91	90	92	93	93	84	92	90	82	79	82
3524	100	103	102	91	99	101	100	89	99	101	99	87	99	102	100	89	100	87	88	81	88
3525	94	94	95	88	95	97	94	86	95	95	86	82	88	92	94	82	93	81	77	73	77
3526	94	92	93	88	93	93	92	86	91	83	83	80	80	90	90	81	89	88	78	73	78
3551	95	98	96	84	93	95	94	81	93	93	90	76	89	95	91	72	91	76	77	69	77
3627	96	91	89	85	89	89	89	84	86	80	81	77	77	91	87	81	82	86	81	78	78
3628	99	100	100	99	100	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
3629	98	99	97	97	97	96	93	93	93	92	89	88	89	99	95	92	95	78	78	71	78
3630	100	100	100	100	100	98	98	97	97	92	88	89	89	91	90	85	89	97	89	89	89
3731	99	92	91	90	90	90	91	89	90	88	88	86	87	88	87	82	80	94	93	92	92
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	90	90	90	90	100	100	100	100
3835	100	103	102	101	104	100	99	98	101	103	102	84	97	101	96	93	97	83	83	77	78
3836	100	100	100	100	100	100	100	99	100	104	102	84	97	100	93	89	95	85	85	79	80
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-28 (continued)
Estimated Changes in Red Squirrel Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 Percent) (a "-" means that red squirrels are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	99	99	99	99	99	101	98	95	98	99	93	91	93	98	96	94	96	93	93	89	92
4252	100	100	100	100	100	108	98	91	100	103	90	87	88	103	91	89	93	90	91	83	90
4253	96	96	96	96	96	98	90	84	92	94	85	83	84	93	84	81	86	86	85	80	85
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	93	93	93	93	93	90	90	90	90	66	66	66	63	93	93	93	93	72	72	67	69
4304	100	100	100	100	100	100	100	100	100	100	100	100	100	25	25	25	25	100	100	100	100
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	98	98	98	98	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	99	102	99	99	101	98	95	93	95	99	98	97	98	92	93	89	88	99	99	97	99
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	91	91	83	78	78	88	82	76	79	81	76	70	73	81	78	70	73	81	79	75	78
5013	99	98	96	93	94	100	98	92	93	98	99	89	90	94	93	71	77	98	97	89	90
5014	99	97	90	80	84	101	98	80	81	97	98	77	78	97	96	72	73	96	93	78	79
5015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	100	99	99	99	99	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100
5017	100	100	100	100	100	101	101	97	98	101	101	96	97	99	99	92	94	100	100	100	100
5018	98	98	95	91	93	101	99	91	92	98	98	90	90	97	97	83	88	97	96	90	91
5130	100	98	99	92	98	98	98	92	98	96	96	90	96	96	97	88	96	97	96	90	96
5131	95	92	92	84	91	90	91	84	91	88	88	82	88	89	89	80	89	89	89	82	88
5132	91	93	94	80	92	92	93	80	92	89	89	78	89	90	90	79	90	90	89	79	88
5133	100	100	100	100	100	99	99	92	98	97	97	89	96	98	98	90	96	97	97	89	96
5134	97	95	95	90	95	96	96	91	95	95	95	91	95	95	95	89	95	95	95	91	94
5135	100	99	99	91	98	98	99	91	96	96	96	90	96	97	98	92	97	98	96	90	96
5136	95	94	94	78	91	92	93	80	89	89	89	78	89	89	90	78	90	91	88	78	88
5137	100	100	100	99	100	100	100	99	100	100	100	99	100	100	100	99	100	100	100	99	100
5138	96	98	99	81	97	101	99	86	95	99	98	84	93	100	98	84	95	98	99	84	94

Table L-29
Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	No. of Wolves Attributed to All Other	Total Wolves
Year 1954	1	0	11	11
	2	0	3	3
	8	5	9	14
	9	8	13	21
	10	68	12	80
	11	77	17	94
	12	29	14	43
	13	53	8	61
	14	180	19	199
	15	98	20	118
	16	44	3	47
	17	21	2	23
	18	51	5	56
	19	6	13	19
	20	25	14	39
	21	1	10	11
				840 +6 from Goats

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	No. of Wolves Attributed to All Other	Total Wolves
Year 1990	1	0	11	11
	2	0	3	3
	8	5	9	14
	9	8	13	21
	10	63	12	75
	11	73	17	80
	12	28	14	42
	13	48	8	56
	14	149	19	168
	15	93	20	113
	16	42	3	45
	17	20	2	22
	18	51	5	56
	19	6	13	19
	20	25	14	39
	21	1	10	11
				775 +6 from Goats

Table L-29 (continued)
Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	No. of Wolves Attributed to All Other	Total Wolves
Alt. A	1	0	11	11
	2	0	3	3
	8	4	9	13
	9	7	13	20
	10	48	12	60
	11	59	17	76
	12	23	14	37
	13	35	8	43
	14	93	19	112
	15	76	20	96
	16	33	3	36
	17	15	2	17
	18	44	5	49
	19	5	13	18
	20	25	14	39
	21	1	10	11
				641 +6 from Goats

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	No. of Wolves Attributed to All Other	Total Wolves
Alt. B	1	0	11	11
Year 2054	2	0	3	3
	8	4	9	13
	9	7	13	20
	10	44	12	56
	11	55	17	72
	12	23	14	37
	13	34	8	42
	14	87	19	106
	15	75	20	95
	16	33	3	36
	17	19	2	21
	18	41	5	46
	19	5	13	18
	20	25	14	39
	21	1	10	11
				616 +6 from Goats

Table L-29 (continued)
Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	No. of Wolves Attributed to All Other	Total Wolves
Alt. C	1	0	11	11
Year 2054	2	0	3	3
	8	3	9	12
	9	6	13	19
	10	41	12	53
	11	51	17	68
	12	21	14	35
	13	30	8	38
	14	70	19	89
	15	66	20	86
	16	30	3	33
	17	10	2	12
	18	34	5	39
	19	5	13	18
	20	25	14	39
	21	1	10	11
				566 +6 from Goats

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	No. of Wolves Attributed to All Other	Total Wolves
Alt. D	1	0	11	11
Year 2054	2	0	3	3
	8	5	9	14
	9	6	13	19
	10	39	12	51
	11	45	17	62
	12	21	14	35
	13	27	8	35
	14	67	19	86
	15	68	20	88
	16	29	3	32
	17	9	2	11
	18	31	5	36
	19	5	13	18
	20	25	14	39
	21	1	10	11
				551 +6 from Goats

Table L-29 (continued)
Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	to All Other	Total Wolves
Preferred Alt.	1	0	11	11
Year 2054	2	0	3	3
	8	4	9	13
	9	6	13	19
	10	42	12	54
	11	59	17	73
	12	20	14	34
	13	31	8	39
	14	76	19	95
	15	68	20	88
	16	32	3	35
	17	11	2	13
	18	38	5	43
	19	5	13	18
	20	25	14	39
	21	1	10	11
				588 +6 from Goats

Year or Alternative	Province No.	No. of Wolves Attributed to Deer	to All Other	Total Wolves
Worst Case	1	0	11	11
Year 2054	2	0	3	3
	8	3	9	12
	9	6	13	19
	10	39	12	51
	11	45	17	52
	12	20	14	34
	13	27	8	35
	14	67	19	86
	15	66	20	86
	16	29	3	32
	17	9	2	11
	18	31	5	36
	19	5	13	18
	20	25	14	39
	21	1	10	11
				536 +6 from Goats

Table L-30
Number of Gray Wolves Harvested (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
101	0	0	0	0	0	0	0	2	101			
303	0	0	2	0	0	0	0	0	303			
404	1	0	0	1	0	2	0	3	404			
405	4	3	6	4	13	0	0	1	405			
406	0	0	0	0	4	2	0	1	406			
407	6	5	5	5	12	0	5	1	407			
408	0	1	0	0	0	0	0	0	408			
509	0	2	2	3	0	2	0	3	509			
510	4	4	1	0	3	1	2	1	510			
511	0	0	0	0	0	0	0	0	511			
612	2	0	0	6	0	6	1	0	612			
613	0	0	0	0	0	0	0	0	613			
614	0	0	0	0	2	0	0	0	614			
715	0	0	0	0	0	0	0	0	715			
716	0	1	0	0	0	0	0	0	716			
717	0	0	1	1	1	2	2	0	717			
718	0	0	0	0	0	0	0	0	718			
719	0	0	0	0	0	0	0	1	719			
820	0	0	0	0	0	0	0	2	820			
821	1	0	0	0	0	0	0	0	821			
822	1	1	3	0	2	0	1	6	822			
823	2	0	0	0	0	0	0	0	823			
GMU 1A	21	17	20	20	37	15	11	21				
901	0	0	1	0	0	1	0	0	901			
902	0	5	4	1	2	0	0	0	902			
1003	0	0	0	0	1	0	0	0	1003			
1105	1	1	1	1	0	0	0	2	1105			
1106	0	0	0	1	2	2	5	4	1106			
1107	2	2	1	0	0	1	2	1	1107			
1108	0	1	0	0	0	0	0	0	1108			
1209	0	0	0	0	0	0	0	0	1209			
1210	0	0	0	1	0	0	0	0	1210			
1211	0	0	0	1	0	0	1	2	1211			
1212	0	1	0	0	0	1	0	0	1212			
1213	0	8	0	1	0	0	0	0	1213			
1214	0	0	0	0	2	1	0	0	1214			
1315	2	1	2	0	5	3	2	3	1315			
1316	0	0	0	1	0	0	0	0	1316			
1317	1	4	1	1	0	2	0	4	1317			
1318	0	1	2	1	1	4	3	10	1318			
1318									1332			
1318									1323			
1319	0	3	1	0	0	1	1	3	1319			
1420	1	4	1	3	1	9	1	0	1420			
1421	1	0	1	0	1	0	2	0	1421			
1422	1	2	0	2	0	9	1	4	1422			
1422									1531			
1524	0	0	0	0	0	0	0	0	1524			
1525	0	1	0	0	0	0	1	1	1525			
1526	0	0	0	0	2	0	0	0	1526			
1527	1	2	2	1	4	4	0	2	1527			
1527									1530			
1528	0	1	0	0	2	1	0	2	1528			
1529	0	0	3	2	2	3	0	1	1529			
GMU 2	10	37	20	17	25	42	19	39				

Table L-30 (continued)
Number of Gray Wolves Harvested (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
1601	0	0	0	0	0	0	0	1	1601			
1602	0	0	0	0	0	0	0	0	1602			
1603	0	0	0	0	0	2	0	3	1603			
1604	0	0	0	0	0	0	0	0	1604			
1605	2	1	3	2	2	6	4	2	1605			
1706	0	0	0	0	0	0	0	0	1706			
1707	1	2	1	0	0	0	0	3	1707			
1708	0	0	1	0	2	0	0	2	1708			
1809	0	0	0	0	0	0	0	0	1809			
1810	0	0	0	0	0	0	0	0	1810			
1811	0	0	0	0	0	0	0	2	1811			
1812	1	0	0	0	0	1	0	0	1812			
1813	0	0	0	0	0	0	0	0	1813			
1814	0	0	0	0	0	0	0	0	1814			
1815	0	0	0	0	0	0	0	0	1815			
1816	0	0	0	0	0	0	0	0	1816			
1817	0	0	0	6	0	1	4	0	1817			
GMU 1B	4	3	5	8	4	10	8	12				
1901	0	4	1	0	0	0	0	4	1901			
1901									1910			
1902	0	0	0	0	0	0	0	0	1902			
1903	1	0	1	2	0	0	0	0	1903			
1904	0	1	0	0	0	0	0	0	1904			
1905	0	0	3	0	0	4	0	5	1905			
1906	0	0	0	0	0	0	0	0	1906			
2007	9	2	2	9	1	0	3	0	2007			
2008	1	0	0	0	0	0	0	0	2008			
2009	1	0	3	1	0	4	0	0	5136			
2009									5137			
2009									5138			
2010	2	0	2	4	2	2	2	0	5130			
2010									5133			
2010									5134			
2011	1	0	0	0	1	1	0	0	5131			
2011									5132			
2011									5135			
2012	0	0	0	0	6	0	1	1	5012			
2013	0	0	0	0	2	0	0	0	5013			
2014	0	3	2	1	1	0	3	0	5014			
2014									5016			
2014									5017			
2014									5018			
2015	0	0	0	0	0	0	0	0	5015			
GMU 3	15	10	14	17	13	11	9	10				
2202	0	0	1	0	0	0	3	0	2202			
2203	0	0	0	0	0	0	0	0	2203			
2304	0	0	0	0	1	0	0	0	2304			
2305	0	1	0	0	1	1	0	0	2305			
2306	1	2	1	1	0	0	0	0	2306			
2307	0	0	0	0	0	0	0	0	2307			
2408	0	0	0	0	0	0	0	0	2408			

Table L-30 (continued)
Number of Gray Wolves Harvested (data not available from the Alaska Department of Fish and Game for 1988, 1989, or 1990)

Old MHU#	1980	1981	1982	1983	1984	1985	1986	1987	NEW WAA#	1988	1989	1990
2409	0	0	1	2	1	2	5	3	2409			
2410	0	2	0	0	0	1	0	1	2410			
2411	0	0	0	0	0	1	0	0	2411			
2412	0	1	0	0	2	0	0	0	2412			
2413	0	0	0	0	0	0	0	0	2413			
2514	0	0	0	1	0	0	0	0	2514			
2515	0	0	0	2	1	0	1	1	2515			
2516	0	0	0	0	0	0	0	0	2516			
2517	0	1	1	2	0	0	0	0	2517			
2518	1	1	0	0	1	0	2	0	2518			
2519	0	0	0	0	0	0	0	0	2519			
2620	0	0	0	0	0	0	0	0	2620			
2621	0	0	0	0	0	0	0	0	2621			
2722	0	0	0	0	0	0	0	0	2722			
2823	0	0	0	0	0	2	1	1	2823			
2824	0	0	0	0	0	0	0	0	2824			
2825	0	0	0	0	0	1	0	0	2825			
2926	3	1	0	0	1	0	3	1	2926			
2927	0	0	0	0	0	0	0	0	2927			
GMU 1C	5	9	4	8	8	8	15	7				
4407	0	0	0	0	0	0	0	0	4407			
4408	1	0	0	0	0	0	0	0	4408			
GMU 1D	1	0	0	0	0	0	0	0				
4503	6	1	3	4	2	13	3	11	4503			
4503									4508			
4504	0	0	0	0	0	0	0	0	4504			
4505	0	0	0	0	0	0	0	0	4505			
4506	0	0	0	0	0	0	0	0	4506			
4607	0	0	0	0	0	0	0	0	4607			
GMU 5A	6	1	3	4	2	13	3	11				
Unknown	1	2	0	0	4	1	2	5				
G.Total	63	79	66	74	93	100	68	105				

Table L-31

Estimated Changes in Bald Eagle Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	53	50	53	53	53	53
303	116	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
404	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
405	87	75	75	75	75	75	75	75	75	75	75	75	75	75	65	56	55	33	75	75	75	75
406	191	154	154	154	154	154	154	154	154	154	154	154	154	154	154	133	129	69	154	154	154	154
407	26	25	25	25	25	25	25	25	25	25	25	25	25	25	15	15	15	15	25	25	25	25
408	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
509	90	88	88	88	88	88	88	88	88	88	88	88	88	88	80	77	76	71	88	88	88	88
510	248	176	176	176	176	176	176	176	176	176	176	176	176	176	118	98	86	85	176	176	176	176
511	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
612	111	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	55	106	106	106	106
613	72	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	64	70	70	70	70
614	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	12	13	13	13	13
715	102	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
716	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
717	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
719	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
820	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
821	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
822	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
823	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337	337
824	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
825	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
826	38	38	38	38	38	38	38	38	38	38	38	38	38	38	35	35	34	28	38	38	38	38
901	99	95	95	95	95	95	95	95	95	95	95	95	95	95	94	85	50	27	95	95	95	95
902	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	316	302	290	316	316	316	316
1003	152	121	121	121	121	121	121	121	121	121	121	121	121	121	67	44	22	16	121	121	121	121
1105	310	307	307	307	307	307	307	307	307	307	307	307	307	307	278	264	209	124	307	307	307	307
1106	42	42	42	42	42	42	42	42	42	42	42	42	42	42	20	15	2	2	42	42	42	42
1107	304	295	295	295	295	295	295	295	295	295	295	295	295	295	347	283	144	134	295	295	295	295
1108	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205	205
1209	166	166	166	166	166	166	166	166	166	166	166	166	166	166	156	143	82	55	166	166	166	166
1210	173	173	173	173	173	173	173	173	173	173	173	173	173	173	165	152	71	42	173	173	173	173
1211	129	125	125	125	125	125	125	125	125	125	125	125	125	125	101	96	72	32	125	125	125	125
1212	54	53	53	53	53	53	53	53	53	53	53	53	53	53	45	45	42	42	53	53	53	53
1213	85	82	82	82	82	82	82	82	82	82	82	82	82	82	81	74	71	70	82	82	82	82
1214	93	84	84	84	84	84	84	84	84	84	84	84	84	84	84	51	36	28	84	84	84	84
1315	180	119	119	119	119	119	119	119	119	119	119	119	119	119	119	94	61	54	119	119	119	119
1316	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
1317	84	35	35	35	35	35	35	35	35	35	35	35	35	35	25	22	22	22	35	35	35	35
1318	47	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	27	46	46	46	46

Table L-31 (continued)
Estimated Changes in Bald Eagle Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	102	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	78	73	86	86	86	86
1323	118	116	116	116	116	116	116	116	116	116	116	116	116	116	79	77	67	66	116	116	116	116
1332	128	106	106	106	106	106	106	106	106	106	106	106	106	106	106	99	74	73	106	106	106	106
1420	89	39	39	39	39	39	39	39	39	39	39	39	39	39	25	25	16	16	39	39	39	39
1421	133	109	109	109	109	109	109	109	109	109	109	109	109	109	70	66	66	66	109	109	109	109
1422	222	165	165	165	165	165	165	165	165	165	165	165	165	165	158	115	84	81	165	165	165	165
1524	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
1525	84	74	74	74	74	74	74	74	74	74	74	74	74	74	34	29	18	14	74	74	74	74
1526	139	122	122	122	122	122	122	122	122	122	122	122	122	122	122	113	101	98	122	122	122	122
1527	73	62	62	62	62	62	62	62	62	62	62	62	62	62	62	54	34	21	62	62	62	62
1528	48	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	35	38	38	38	38
1529	166	129	129	129	129	129	129	129	129	129	129	129	129	129	129	115	105	84	129	129	129	129
1530	126	99	99	99	99	99	99	99	99	99	99	99	99	99	94	73	44	25	99	99	99	99
1531	227	178	178	178	178	178	178	178	178	178	178	178	178	178	71	46	21	18	178	178	178	178
1601	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	55	38	61	61	61	61
1602	138	135	135	135	135	135	135	135	135	135	135	135	135	135	124	124	91	65	135	135	135	135
1603	71	64	64	64	64	64	64	64	64	64	64	64	64	64	55	52	48	41	64	64	64	64
1604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1605	96	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	56	66	66	66	66
1706	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
1707	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
1708	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
1809	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
1810	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	35	41	41	41	41
1811	86	83	83	83	83	83	83	83	83	83	83	83	83	83	79	79	71	66	83	83	83	83
1812	84	84	84	84	84	84	84	84	84	84	84	84	84	84	81	80	77	74	84	84	84	84
1813	100	47	47	47	47	47	47	47	47	47	47	47	47	47	36	35	35	31	47	47	47	47
1814	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	54	50	60	60	60	60
1815	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
1816	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	35	18	41	41	41	41
1817	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	76	96	96	96	96
1901	258	248	248	248	248	248	248	248	248	248	248	248	248	248	206	170	146	94	248	248	248	248
1902	42	41	41	41	41	41	41	41	41	41	41	41	41	41	29	29	20	10	41	41	41	41
1903	145	145	145	145	145	145	145	145	145	145	145	145	145	145	144	126	100	62	145	145	145	145
1904	111	95	95	95	95	95	95	95	95	95	95	95	95	95	80	50	43	21	95	95	95	95
1905	181	145	145	145	145	145	145	145	145	145	145	145	145	145	118	81	65	62	145	145	145	145
1906	127	119	119	119	119	119	119	119	119	119	119	119	119	119	101	93	25	12	119	119	119	119
1910	241	238	238	238	238	238	238	238	238	238	238	238	238	238	219	213	209	202	238	238	238	238
2007	148	139	139	139	139	139	139	139	139	139	139	139	139	139	139	139	122	79	139	139	139	139
2008	33	33	33	33	33	33	33	33	33	33	33	33	33	33	27	26	21	16	33	33	33	33
2202	60	53	53	53	53	53	53	53	53	53	53	53	53	53	49	49	49	49	53	53	53	53
2203	14	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Table L-31 (continued)

Estimated Changes in Bald Eagle Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	64	48	48	48	48	48	48	48	48	48	48	48	48	48	44	44	36	34	48	48	48	48
2305	131	131	131	131	131	131	131	131	131	131	131	131	131	131	120	118	105	102	131	131	131	131
2306	54	39	39	39	39	39	39	39	39	39	39	39	39	39	29	28	23	23	39	39	39	39
2408	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
2409	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
2410	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
2411	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
2412	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
2413	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
2514	51	51	51	51	51	51	51	51	51	51	51	51	51	51	42	34	28	28	51	51	51	51
2515	38	38	38	38	38	38	38	38	38	38	38	38	38	38	35	35	34	34	38	38	38	38
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	40	40	40	40	40	40	40	40	40	40	40	40	40	40	37	37	28	26	40	40	40	40
2518	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
2519	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	41	36	54	54	54	54
2620	12	12	12	12	12	12	12	12	12	12	12	12	12	12	8	6	6	6	12	12	12	12
2621	18	18	18	18	18	18	18	18	18	18	18	18	18	18	9	2	2	2	18	18	18	18
2722	21	21	21	21	21	21	21	21	21	21	21	21	21	21	15	15	14	14	21	21	21	21
2823	289	289	289	289	289	289	289	289	289	289	289	289	289	289	139	128	128	119	289	289	289	289
2824	42	42	42	42	42	42	42	42	42	42	42	42	42	42	41	34	34	28	42	42	42	42
2825	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
2926	263	263	263	263	263	263	263	263	263	263	263	263	263	263	258	253	229	157	263	263	263	263
2927	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	201	197	184	201	201	201	201
3001	250	183	183	183	183	183	183	183	183	183	183	183	183	183	91	91	88	80	183	183	183	183
3002	87	45	45	45	45	45	45	45	45	45	45	45	45	45	35	35	32	31	45	45	45	45
3003	140	137	137	137	137	137	137	137	137	137	137	137	137	137	73	73	70	64	137	137	137	137
3104	143	118	118	118	118	118	118	118	118	118	118	118	118	118	89	88	88	81	118	118	118	118
3105	86	86	86	86	86	86	86	86	86	86	86	86	86	86	79	79	79	79	86	86	86	86
3206	137	137	137	137	137	137	137	137	137	137	137	137	137	137	115	115	115	115	137	137	137	137
3207	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178	178
3308	295	181	181	181	181	181	181	181	181	181	181	181	181	181	153	127	94	68	181	181	181	181
3309	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	64	61	50	65	65	65	65
3310	188	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
3311	130	123	123	123	123	123	123	123	123	123	123	123	123	123	65	57	45	44	123	123	123	123
3312	43	37	37	37	37	37	37	37	37	37	37	37	37	37	14	14	13	11	37	37	37	37
3313	202	97	97	97	97	97	97	97	97	97	97	97	97	97	71	62	43	35	97	97	97	97
3314	65	56	56	56	56	56	56	56	56	56	56	56	56	56	24	24	22	17	56	56	56	56
3315	143	124	124	124	124	124	124	124	124	124	124	124	124	124	105	100	53	47	124	124	124	124
3416	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
3417	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
3418	114	114	114	114	114	114	114	114	114	114	114	114	114	114	113	113	113	113	114	114	114	114
3419	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123

Table L-31 (continued)

Estimated Changes in Bald Eagle Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151	151
3523	140	129	129	129	129	129	129	129	129	129	129	129	129	129	89	83	67	51	129	129	129	129
3524	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	5	5	5	5
3525	162	124	124	124	124	124	124	124	124	124	124	124	124	124	97	97	65	35	124	124	124	124
3526	89	66	66	66	66	66	66	66	66	66	66	66	66	66	51	43	32	22	66	66	66	66
3551	123	117	117	117	117	117	117	117	117	117	117	117	117	117	113	106	77	55	117	117	117	117
3627	86	74	74	74	74	74	74	74	74	74	74	74	74	74	62	57	49	44	74	74	74	74
3628	77	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74
3629	260	231	231	231	231	231	231	231	231	231	231	231	231	231	231	214	197	157	231	231	231	231
3630	122	122	122	122	122	122	122	122	122	122	122	122	122	122	66	56	45	33	122	122	122	122
3731	163	156	156	156	156	156	156	156	156	156	156	156	156	156	117	113	80	75	156	156	156	156
3732	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
3733	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226	226
3734	274	274	274	274	274	274	274	274	274	274	274	274	274	274	225	225	225	225	274	274	274	274
3835	57	57	57	57	57	57	57	57	57	57	57	57	57	57	51	43	41	37	57	57	57	57
3836	110	110	110	110	110	110	110	110	110	110	110	110	110	110	94	71	67	55	110	110	110	110
3837	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
3938	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114
3939	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164
3940	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
4041	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
4042	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
4043	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
4044	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
4054	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
4055	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
4145	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73
4146	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
4147	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
4148	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
4149	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
4150	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54	54
4222	174	165	165	165	165	165	165	165	165	165	165	165	165	165	165	153	148	141	165	165	165	165
4252	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	16	13	7	25	25	25	25
4253	150	117	117	117	117	117	117	117	117	117	117	117	117	117	73	53	45	32	117	117	117	117
4256	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
4302	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
4304	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	1	1	1
4407	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1	1	1	1	4	4	4	4
4408	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
4503	121	121	121	121	121	121	121	121	121	121	121	121	121	121	120	120	120	120	121	121	121	121

Table L-31 (continued)

Estimated Changes in Bald Eagle Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
4505	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
4506	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
4508	140	140	140	140	140	140	140	140	140	140	140	140	140	140	134	134	134	134	140	140	140	140
4607	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	430	399	399	399	399	399	399	399	399	399	399	399	399	399	348	325	283	242	399	399	399	399
5013	204	202	202	202	202	202	202	202	202	202	202	202	202	202	172	166	114	69	202	202	202	202
5014	178	167	167	167	167	167	167	167	167	167	167	167	167	167	158	151	109	87	167	167	167	167
5015	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
5016	333	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330
5017	538	538	538	538	538	538	538	538	538	538	538	538	538	538	538	538	461	388	538	538	538	538
5018	133	123	123	123	123	123	123	123	123	123	123	123	123	123	123	123	109	73	123	123	123	123
5130	187	185	185	185	185	185	185	185	185	185	185	185	185	185	185	185	172	143	185	185	185	185
5131	165	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	157	132	164	164	164	164
5132	72	69	69	69	69	69	69	69	69	69	69	69	69	69	52	52	51	49	69	69	69	69
5133	199	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	194	171	196	196	196	196
5134	213	156	156	156	156	156	156	156	156	156	156	156	156	156	156	156	129	98	156	156	156	156
5135	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	31	30	35	35	35	35
5136	73	64	64	64	64	64	64	64	64	64	64	64	64	64	57	57	43	39	64	64	64	64
5137	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
5138	71	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	48	65	65	65	65

Table L-32

Estimated Changes in Bald Eagle Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 Percent) (a "-" means bald eagles are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94	100	100	100	100
303	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	86	86	86	86	86	86	86	86	86	86	86	86	86	75	64	63	38	86	86	86	86
406	81	81	81	81	81	81	81	81	81	81	81	81	81	81	70	68	36	81	81	81	81
407	96	96	96	96	96	96	96	96	96	96	96	96	96	58	58	58	58	96	96	96	96
408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
509	98	98	98	98	98	98	98	98	98	98	98	98	98	89	86	84	79	98	98	98	98
510	71	71	71	71	71	71	71	71	71	71	71	71	71	48	40	35	34	71	71	71	71
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	50	95	95	95	95
613	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	89	97	97	97	97
614	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	92	100	100	100	100
715	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	100	100	100	100	92	92	89	74	100	100	100	100
901	96	96	96	96	96	96	96	96	96	96	96	96	96	95	86	51	27	96	96	96	96
902	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	96	92	100	100	100	100
1003	80	80	80	80	80	80	80	80	80	80	80	80	80	44	29	14	11	80	80	80	80
1105	99	99	99	99	99	99	99	99	99	99	99	99	99	90	85	67	40	99	99	99	99
1106	100	100	100	100	100	100	100	100	100	100	100	100	100	48	36	5	5	100	100	100	100
1107	97	97	97	97	97	97	97	97	97	97	97	97	97	114	93	47	44	97	97	97	97
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	100	100	100	100	100	100	100	100	100	100	100	94	86	49	33	100	100	100	100
1210	100	100	100	100	100	100	100	100	100	100	100	100	100	95	88	41	24	100	100	100	100
1211	97	97	97	97	97	97	97	97	97	97	97	97	97	78	74	56	25	97	97	97	97
1212	98	98	98	98	98	98	98	98	98	98	98	98	98	83	83	78	78	98	98	98	98
1213	96	96	96	96	96	96	96	96	96	96	96	96	96	95	87	84	82	96	96	96	96
1214	90	90	90	90	90	90	90	90	90	90	90	90	90	90	55	39	30	90	90	90	90
1315	66	66	66	66	66	66	66	66	66	66	66	66	66	66	52	34	30	66	66	66	66
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	42	42	42	42	42	42	42	42	42	42	42	42	42	30	26	26	26	42	42	42	42

Table L-32 (continued)

Estimated Changes in Bald Eagle Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability

(1954 = 100 Percent) (a "-" means bald eagles are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	57	98	98	98	98
1319	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	76	72	84	84	84	84
1323	98	98	98	98	98	98	98	98	98	98	98	98	98	67	65	57	56	98	98	98	98
1332	83	83	83	83	83	83	83	83	83	83	83	83	83	83	77	58	57	83	83	83	83
1420	44	44	44	44	44	44	44	44	44	44	44	44	44	28	28	18	18	44	44	44	44
1421	82	82	82	82	82	82	82	82	82	82	82	82	82	53	50	50	50	82	82	82	82
1422	74	74	74	74	74	74	74	74	74	74	74	74	74	71	52	38	36	74	74	74	74
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	88	88	88	88	88	88	88	88	88	88	88	88	88	40	35	21	17	88	88	88	88
1526	88	88	88	88	88	88	88	88	88	88	88	88	88	88	81	73	71	88	88	88	88
1527	85	85	85	85	85	85	85	85	85	85	85	85	85	85	74	47	29	85	85	85	85
1528	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	73	79	79	79	79
1529	78	78	78	78	78	78	78	78	78	78	78	78	78	78	69	63	51	78	78	78	78
1530	79	79	79	79	79	79	79	79	79	79	79	79	79	75	58	35	20	79	79	79	79
1531	78	78	78	78	78	78	78	78	78	78	78	78	78	31	20	9	8	78	78	78	78
1601	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	90	62	100	100	100	100
1602	98	98	98	98	98	98	98	98	98	98	98	98	98	90	90	66	47	98	98	98	98
1603	90	90	90	90	90	90	90	90	90	90	90	90	90	77	73	68	58	90	90	90	90
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	58	69	69	69	69
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85	100	100	100	100
1811	97	97	97	97	97	97	97	97	97	97	97	97	97	92	92	83	77	97	97	97	97
1812	106	106	106	106	106	106	106	106	106	106	106	106	106	96	95	92	88	106	106	106	106
1813	47	47	47	47	47	47	47	47	47	47	47	47	47	36	35	35	31	47	47	47	47
1814	102	102	102	102	102	102	102	102	102	102	102	102	102	100	100	90	83	102	102	102	102
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85	44	100	100	100	100
1817	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	79	100	100	100	100
1901	96	96	96	96	96	96	96	96	96	96	96	96	96	80	66	57	36	96	96	96	96
1902	98	98	98	98	98	98	98	98	98	98	98	98	98	69	69	48	24	98	98	98	98
1903	101	101	101	101	101	101	101	101	101	101	101	101	101	99	87	69	43	101	101	101	101
1904	86	86	86	86	86	86	86	86	86	86	86	86	86	72	45	39	19	86	86	86	86
1905	80	80	80	80	80	80	80	80	80	80	80	80	80	65	45	36	34	80	80	80	80
1906	94	94	94	94	94	94	94	94	94	94	94	94	94	80	73	20	9	94	94	94	94
1910	99	99	99	99	99	99	99	99	99	99	99	99	99	91	88	87	84	99	99	99	99
2007	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	82	53	94	94	94	94
2008	94	94	94	94	94	94	94	94	94	94	94	94	94	82	79	64	48	94	94	94	94

Table L-32 (continued)
Estimated Changes in Bald Eagle Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 Percent) (a "-" means bald eagles are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	100	100	100	100	100	100	100	100	100	100	100	100	100	82	82	82	82	100	100	100	100
2203	88	88	88	88	88	88	88	88	88	88	88	88	88	71	71	71	71	88	88	88	88
2304	71	71	71	71	71	71	71	71	71	71	71	71	71	69	69	56	53	71	71	71	71
2305	75	75	75	75	75	75	75	75	75	75	75	75	75	92	90	80	78	75	75	75	75
2306	100	100	100	100	100	100	100	100	100	100	100	100	100	54	52	43	43	100	100	100	100
2408	72	72	72	72	72	72	72	72	72	72	72	72	72	100	100	100	100	72	72	72	72
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	100	100	100	100	100	100	100	82	67	55	55	100	100	100	100
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	92	92	89	89	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	100	100	100	100	100	100	100	100	100	100	93	93	70	65	100	100	100	100
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	76	67	100	100	100	100
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	67	50	50	50	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	50	11	11	11	100	100	100	100
2722	100	100	100	100	100	100	100	100	100	100	100	100	100	71	71	67	67	100	100	100	100
2823	100	100	100	100	100	100	100	100	100	100	100	100	100	48	44	44	41	100	100	100	100
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	98	81	81	67	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	100	100	100	100	100	100	100	100	100	100	100	100	98	96	87	60	100	100	100	100
2927	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	92	100	100	100	100
3001	73	73	73	73	73	73	73	73	73	73	73	73	73	36	36	35	32	73	73	73	73
3002	52	52	52	52	52	52	52	52	52	52	52	52	52	40	40	37	36	52	52	52	52
3003	98	98	98	98	98	98	98	98	98	98	98	98	98	52	52	50	46	98	98	98	98
3104	83	83	83	83	83	83	83	83	83	83	83	83	83	62	62	62	57	83	83	83	83
3105	100	100	100	100	100	100	100	100	100	100	100	100	100	92	92	92	92	100	100	100	100
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	84	84	84	84	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	61	61	61	61	61	61	61	61	61	61	61	61	61	52	43	32	23	61	61	61	61
3309	100	100	100	100	100	100	100	100	100	100	100	100	100	100	98	94	77	100	100	100	100
3310	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
3311	95	95	95	95	95	95	95	95	95	95	95	95	95	50	44	35	34	95	95	95	95
3312	86	86	86	86	86	86	86	86	86	86	86	86	86	33	33	30	26	86	86	86	86
3313	48	48	48	48	48	48	48	48	48	48	48	48	48	35	31	21	17	48	48	48	48
3314	86	86	86	86	86	86	86	86	86	86	86	86	86	37	37	34	26	86	86	86	86
3315	87	87	87	87	87	87	87	87	87	87	87	87	87	73	70	37	33	87	87	87	87
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-32 (continued)

Estimated Changes in Bald Eagle Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability

(1954 = 100 Percent) (a "-" means bald eagles are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3523	92	92	92	92	92	92	92	92	92	92	92	92	92	64	59	48	36	92	92	92	92
3524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	60	100	100	100	100
3525	77	77	77	77	77	77	77	77	77	77	77	77	77	60	60	40	22	77	77	77	77
3526	74	74	74	74	74	74	74	74	74	74	74	74	74	57	48	36	25	74	74	74	74
3551	95	95	95	95	95	95	95	95	95	95	95	95	95	92	86	63	45	95	95	95	95
3627	86	86	86	86	86	86	86	86	86	86	86	86	86	72	66	57	51	86	86	86	86
3628	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
3629	89	89	89	89	89	89	89	89	89	89	89	89	89	89	82	76	60	89	89	89	89
3630	100	100	100	100	100	100	100	100	100	100	100	100	100	54	46	37	27	100	100	100	100
3731	96	96	96	96	96	96	96	96	96	96	96	96	96	72	69	49	46	96	96	96	96
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	82	82	82	82	100	100	100	100
3835	100	100	100	100	100	100	100	100	100	100	100	100	100	89	75	72	65	100	100	100	100
3836	100	100	100	100	100	100	100	100	100	100	100	100	100	85	65	61	50	100	100	100	100
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	95	95	95	95	95	95	95	95	95	95	95	95	95	95	88	85	81	95	95	95	95
4252	100	100	100	100	100	100	100	100	100	100	100	100	100	100	64	52	28	100	100	100	100
4253	78	78	78	78	78	78	78	78	78	78	78	78	78	49	35	30	21	78	78	78	78
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93

Table L-32 (continued)

Estimated Changes in Bald Eagle Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means bald eagles are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	100	100	100	100
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	25	25	25	25	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	100	100	100	100	100	100	100	100	100	100	100	100	100	96	96	96	96	100	100	100	100
4607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5012	93	93	93	93	93	93	93	93	93	93	93	93	93	81	76	66	56	93	93	93	93
5013	99	99	99	99	99	99	99	99	99	99	99	99	99	84	81	56	34	99	99	99	99
5014	94	94	94	94	94	94	94	94	94	94	94	94	94	89	85	61	49	94	94	94	94
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
5017	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	86	72	100	100	100	100
5018	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	82	55	92	92	92	92
5130	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	92	76	99	99	99	99
5131	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	95	80	99	99	99	99
5132	96	96	96	96	96	96	96	96	96	96	96	96	96	72	72	71	68	96	96	96	96
5133	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	97	86	98	98	98	98
5134	73	73	73	73	73	73	73	73	73	73	73	73	73	73	73	61	46	73	73	73	73
5135	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	89	86	100	100	100	100
5136	88	88	88	88	88	88	88	88	88	88	88	88	88	78	78	59	53	88	88	88	88
5137	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5138	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	68	92	92	92	92

Table L-33
Estimated Changes in Hairy Woodpecker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	379	344	342	340	340	319	343	342	342	330	342	340	337	312	343	341	338	329	343	342	339	329
303	167	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134	134
404	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653
405	623	546	529	495	478	326	525	488	470	317	498	493	477	304	501	466	449	255	506	489	474	304
406	1,439	1,183	1,220	1,138	1,097	725	1,172	1,090	1,027	642	1,097	1,072	1,014	497	1,112	1,030	978	431	1,138	1,069	1,017	524
407	454	445	450	450	439	418	427	424	377	245	426	425	366	185	415	412	365	223	426	426	368	189
408	158	149	149	149	149	137	149	149	149	137	149	149	149	137	149	149	149	127	149	149	149	137
509	904	844	840	819	772	665	845	841	799	677	843	837	785	615	826	816	777	643	842	828	774	598
510	2,188	1,521	1,390	1,236	1,185	963	1,323	1,299	1,198	888	1,299	1,225	1,132	670	1,225	1,156	1,061	631	1,383	1,244	1,149	741
511	313	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
612	688	664	689	689	547	343	689	689	481	331	658	658	424	206	677	677	639	253	650	650	508	221
613	450	416	419	419	407	391	419	419	402	390	447	447	310	182	430	430	424	361	438	438	355	189
614	114	114	114	114	94	77	114	114	95	77	114	114	74	35	114	114	113	77	114	114	75	35
715	750	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743	743
716	1,258	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242	1,242
717	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
718	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
719	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717
820	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520	520
821	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824	824
822	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982	1,982
823	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098	1,098
824	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492	492
825	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443	443
826	183	183	183	183	183	183	183	183	183	183	164	147	113	76	168	164	132	104	193	188	167	141
901	465	439	436	432	252	240	445	438	238	222	459	384	175	141	458	381	190	129	455	394	225	208
902	1,031	1,031	1,031	1,031	1,020	1,015	1,031	1,031	1,020	1,015	1,031	1,031	1,005	987	1,031	1,031	1,002	988	1,031	1,031	1,031	1,031
1003	1,334	655	331	315	274	224	346	345	283	220	316	282	236	154	292	183	124	33	612	376	221	154
1105	1,438	1,420	1,416	1,412	1,154	916	1,410	1,408	1,384	1,322	1,411	1,247	852	526	1,360	1,217	899	489	1,389	1,258	870	584
1106	92	92	85	85	80	79	81	77	60	50	80	69	54	46	68	42	16	7	90	89	87	87
1107	1,706	1,591	1,592	1,587	1,455	1,417	1,592	1,545	1,349	1,216	1,579	1,321	977	794	1,592	1,296	993	885	1,558	1,440	1,230	1,072
1108	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622	622
1209	736	736	731	690	610	573	729	690	622	592	737	624	438	320	687	548	340	213	733	690	620	590
1210	954	954	950	878	748	711	948	868	706	624	955	818	600	481	853	699	354	187	955	818	600	481
1211	820	808	734	703	615	332	753	700	606	318	731	679	579	277	705	644	529	176	807	695	595	277
1212	192	189	189	180	157	156	188	179	157	156	188	157	97	81	189	188	180	179	186	156	117	115
1213	544	536	511	497	469	429	513	500	475	443	474	369	294	240	482	431	391	357	464	364	295	240
1214	966	770	760	707	611	397	760	704	607	394	890	585	389	231	780	539	347	180	860	578	398	231
1315	1,440	738	739	578	337	255	737	548	330	252	701	496	279	203	743	538	245	160	670	509	278	206
1316	602	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598	598
1317	971	433	407	394	368	315	394	379	353	289	365	329	212	137	325	294	205	158	337	317	211	140
1318	618	551	567	480	250	172	591	558	266	189	553	453	250	121	546	511	278	146	531	438	198	99

Table L-33 (continued)

Estimated Changes in Hairy Woodpecker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	1,760	1,213	1,280	1,131	842	645	1,262	1,054	703	486	1,136	823	499	222	1,241	1,127	734	525	1,082	910	639	402
1323	353	331	334	309	244	222	335	326	243	222	328	299	241	205	309	295	206	155	326	299	232	205
1332	726	488	502	471	380	335	521	498	367	298	535	450	277	171	507	453	301	222	518	450	265	171
1420	1,009	432	414	324	184	106	415	283	184	106	399	249	144	56	387	298	133	45	318	254	141	59
1421	1,829	1,187	1,221	983	749	620	1,262	943	622	449	1,188	934	530	338	1,166	891	408	196	1,114	967	617	450
1422	2,705	1,332	1,292	1,032	811	765	1,205	760	577	544	933	710	520	487	1,029	686	286	236	1,235	865	445	393
1524	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157
1525	1,439	691	310	261	239	199	312	312	239	199	271	218	197	139	265	207	154	55	539	257	236	139
1526	1,008	906	888	883	880	879	831	808	771	748	816	771	734	707	802	754	700	669	803	767	731	702
1527	794	507	459	375	316	253	453	380	311	228	436	327	242	132	430	337	199	90	355	334	273	177
1528	382	311	295	278	271	258	284	268	253	232	241	205	177	142	253	212	175	138	234	214	196	165
1529	1,704	1,070	946	795	726	598	882	755	634	451	900	708	560	376	973	766	590	397	781	649	549	368
1530	1,170	501	579	406	281	155	591	444	304	149	595	433	297	137	597	447	224	56	454	412	297	136
1531	1,149	625	503	402	330	317	522	413	339	317	443	355	281	257	361	204	77	45	513	395	299	276
1601	521	521	502	502	365	300	504	504	375	300	498	498	337	211	497	497	351	285	517	488	349	211
1602	644	637	637	637	637	637	637	637	637	637	637	637	637	637	627	627	490	441	659	659	527	475
1603	276	248	218	218	200	188	216	212	192	175	215	208	183	158	211	203	178	160	212	211	192	173
1604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1605	530	306	296	296	255	225	304	290	219	159	298	278	213	149	298	278	208	158	292	285	224	159
1706	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
1707	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440
1708	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760	760
1809	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
1810	393	393	351	329	282	252	367	362	269	223	376	376	243	140	374	374	273	200	393	382	259	156
1811	481	474	444	432	405	388	454	451	408	387	442	442	372	319	448	448	399	364	459	453	408	371
1812	513	498	494	493	469	455	491	486	471	460	495	488	445	417	492	491	458	436	474	467	447	421
1813	615	352	352	352	352	352	352	352	352	352	346	339	290	262	352	348	327	307	351	351	277	270
1814	398	378	371	369	336	314	373	367	338	314	377	375	333	306	377	375	327	295	353	348	333	306
1815	289	286	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285
1816	205	205	191	176	135	110	205	199	158	110	202	192	147	99	194	184	132	81	184	174	145	105
1817	700	700	700	700	588	506	700	700	594	506	700	700	406	215	700	700	681	495	700	700	455	278
1901	1,278	1,138	1,043	1,017	782	685	916	865	731	633	871	768	602	455	858	719	592	405	1,004	939	614	456
1902	95	79	74	67	50	39	81	77	59	39	81	76	56	35	86	81	52	23	72	68	54	35
1903	1,183	963	955	944	698	556	946	847	661	508	952	799	543	387	905	757	542	368	966	821	566	410
1904	413	255	256	240	236	214	255	241	231	217	244	213	173	119	220	152	130	63	245	219	171	131
1905	1,495	857	757	601	498	342	757	560	400	342	765	495	341	327	729	432	301	258	800	535	348	327
1906	233	90	87	82	81	77	86	82	78	77	84	75	62	55	75	59	25	6	90	90	80	80
1910	734	720	725	721	694	683	714	708	693	683	717	705	684	666	715	694	675	647	733	725	687	668
2007	1,563	1,004	965	898	696	607	936	748	618	531	961	688	529	425	982	686	504	396	994	746	599	506
2008	94	94	94	94	94	94	92	79	57	44	86	74	49	34	94	86	59	45	82	82	58	44
2202	231	197	197	197	197	197	174	174	174	174	95	95	95	95	194	194	194	194	136	136	114	114
2203	305	274	274	274	274	274	274	274	274	274	266	266	266	266	274	274	274	274	270	270	266	266

Table L-33 (continued)

Estimated Changes in Hairy Woodpecker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	317	288	269	269	269	269	269	269	269	269	260	260	260	260	259	259	204	186	266	266	260	260
2305	554	545	533	515	304	256	533	515	401	256	512	512	333	230	524	520	338	293	517	517	267	219
2306	437	365	371	340	198	151	371	340	270	151	359	359	234	134	345	336	183	146	346	316	187	136
2408	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
2409	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142	142
2410	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
2411	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124
2412	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
2413	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63
2514	344	344	244	244	343	343	344	339	289	288	344	344	283	180	344	339	287	286	344	344	307	221
2515	407	407	407	407	407	407	407	407	407	407	407	407	407	407	401	400	393	393	407	407	407	407
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	112	112	112	112	105	94	112	112	102	90	112	112	105	90	112	112	85	82	112	112	99	94
2518	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259
2519	161	161	161	161	153	128	161	161	149	124	161	161	153	120	161	161	121	116	161	161	136	124
2620	20	20	20	20	20	20	20	20	20	20	20	20	20	20	15	8	8	8	20	20	20	20
2621	61	61	61	61	61	61	61	61	61	61	61	61	61	61	59	36	36	36	61	61	61	61
2722	285	284	286	286	283	283	286	286	283	283	286	286	284	276	286	285	277	277	286	286	286	276
2823	1,266	1,266	968	953	940	919	985	963	950	901	632	632	627	627	673	612	599	520	627	627	627	627
2824	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	144	144	90	186	186	186	186
2825	522	522	522	522	522	522	522	522	522	522	522	522	522	522	523	523	522	521	523	523	522	522
2926	1,382	1,382	1,382	1,371	1,382	1,207	1,371	1,342	1,027	962	1,307	1,307	982	929	1,380	1,345	1,170	894	1,249	1,180	969	929
2927	1,613	1,613	1,613	1,503	1,472	1,419	1,613	1,556	1,471	1,416	1,396	1,320	810	658	1,613	1,569	1,451	1,398	1,486	1,397	935	692
3001	718	470	456	456	439	439	436	436	415	415	291	263	240	237	295	294	282	271	342	340	337	328
3002	345	169	168	168	153	153	162	162	149	149	148	142	138	137	150	150	143	139	160	160	160	157
3003	386	333	285	285	274	268	278	278	256	253	222	209	197	191	242	242	234	220	253	253	246	233
3104	656	376	368	368	356	349	362	362	346	339	280	256	216	213	275	271	269	260	297	278	254	238
3105	240	236	215	215	215	215	220	220	220	220	162	162	162	162	155	155	153	153	215	215	215	215
3206	194	194	194	194	194	194	194	194	194	194	193	193	193	193	141	141	141	141	193	193	193	193
3207	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292
3308	1,710	1,016	932	842	769	564	888	839	746	556	772	725	633	493	984	868	688	473	911	767	649	493
3309	232	232	232	219	212	175	225	207	200	175	212	188	176	175	232	214	204	170	186	186	179	175
3310	431	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370	370
3311	348	325	325	325	325	325	273	273	254	241	259	228	203	202	230	216	192	177	227	227	203	202
3312	93	84	69	69	55	55	66	66	55	55	55	48	44	44	43	43	40	37	49	49	49	46
3313	868	483	376	376	251	236	376	376	248	236	229	225	212	196	390	331	197	168	353	288	216	196
3314	251	207	176	176	157	157	172	172	156	156	122	108	99	98	97	97	91	84	114	114	114	108
3315	473	390	309	289	251	233	274	274	237	233	274	259	230	222	321	308	188	176	315	266	232	226
3416	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
3417	318	318	318	318	318	318	318	318	318	318	313	313	313	313	318	318	318	318	318	318	318	318
3418	306	306	306	306	306	306	306	306	306	306	266	266	266	266	306	306	306	306	306	306	306	306
3419	331	331	331	331	331	331	331	331	331	331	322	322	322	322	331	331	331	331	331	331	331	331

Table L-33 (continued)
Estimated Changes in Hairy Woodpecker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297
3421	310	310	308	308	303	303	310	310	310	310	297	297	297	297	310	310	309	309	310	310	310	310
3523	519	457	453	453	450	448	445	432	414	394	442	396	379	338	384	368	315	254	429	344	296	240
3524	95	95	92	87	67	54	89	84	65	53	89	81	61	37	94	88	65	53	73	73	57	37
3525	939	673	588	588	508	424	632	572	486	381	665	507	443	279	552	551	444	304	550	466	381	280
3526	523	388	358	358	334	320	361	342	306	281	299	292	269	236	330	311	263	207	360	271	212	178
3551	721	542	546	518	397	319	530	499	381	303	526	474	356	200	565	511	303	195	430	430	328	200
3627	451	366	327	304	286	234	316	303	280	232	282	271	248	215	335	310	271	224	315	281	252	215
3628	421	409	408	408	408	408	409	409	409	409	408	408	408	408	408	408	408	408	408	408	408	408
3629	749	642	649	623	612	560	632	595	580	526	602	562	544	542	653	593	549	438	489	487	376	364
3630	296	296	294	294	294	291	284	276	265	253	245	212	199	176	213	190	155	122	280	215	194	169
3731	409	358	315	306	288	280	299	298	282	280	272	261	241	236	287	278	192	183	326	309	297	295
3732	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119	119
3733	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659	659
3734	506	506	506	506	506	506	506	506	506	506	506	506	506	506	410	410	410	410	506	506	506	506
3835	229	229	226	203	200	143	216	194	191	139	229	229	171	86	229	200	185	150	205	205	164	75
3836	722	722	712	708	708	699	707	702	701	687	707	687	562	416	701	594	555	464	614	614	549	409
3837	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699	699
3938	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232	1,232
3939	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974	974
3940	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949	949
4041	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764	764
4042	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120	1,120
4043	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067	1,067
4044	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597
4054	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904	904
4055	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080	1,080
4145	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497	497
4146	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471	471
4147	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286	286
4148	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596	596
4149	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420	420
4150	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
4222	892	864	864	864	864	864	839	775	735	668	823	723	661	589	800	738	710	654	760	737	666	628
4252	215	215	215	215	215	215	215	186	164	131	215	167	140	103	201	149	141	102	184	179	145	125
4253	447	348	348	348	348	348	354	286	243	179	357	283	242	187	326	235	212	141	301	285	228	194
4256	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196
4302	78	55	55	55	55	55	51	51	51	51	21	21	21	21	55	55	55	55	28	28	21	21
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	101	101	101	101	101	101	101	101	101	101	101	101	101	101	100	100	100	100	101	101	101	101
4408	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268	268
4503	615	615	615	615	615	615	615	615	615	615	615	615	615	615	612	611	611	611	615	615	615	615

Table L-33 (continued)
Estimated Changes in Hairy Woodpecker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
4505	171	167	169	165	165	165	167	166	165	165	166	166	166	164	165	165	165	164	167	167	166	164
4506	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168	168
4508	1,455	1,281	1,369	1,259	1,248	1,227	1,235	1,092	1,054	957	1,264	1,232	1,147	611	1,033	1,021	941	737	1,271	1,271	1,217	725
4607	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	3,275	2,411	2,242	1,852	1,571	1,172	2,094	1,778	1,503	1,238	1,856	1,574	1,262	941	1,842	1,602	1,307	1,024	1,854	1,681	1,505	1,217
5013	924	900	885	845	782	748	911	891	771	736	886	886	714	664	831	796	435	232	881	855	718	669
5014	787	749	665	581	448	376	713	676	450	383	665	665	416	344	659	633	335	249	657	618	416	344
5015	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247	247
5016	1,252	1,237	1,233	1,228	1,221	1,218	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,237	1,233	1,232	1,220	1,217	1,237	1,237	1,237	1,237
5017	1,522	1,522	1,522	1,522	1,522	1,522	1,524	1,524	1,374	1,221	1,525	1,525	1,346	1,173	1,478	1,468	1,225	1,040	1,521	1,521	1,520	1,520
5018	502	455	455	419	362	330	481	464	359	318	454	454	358	330	457	447	271	183	451	436	358	330
5130	815	795	706	706	617	577	709	709	627	563	696	692	597	517	685	685	541	418	702	689	595	517
5131	593	457	447	447	363	334	436	436	361	325	424	420	340	296	426	426	296	206	434	422	342	299
5132	380	186	215	215	138	112	207	207	134	100	206	200	132	93	197	197	123	83	214	201	132	93
5133	881	862	861	861	861	861	837	837	659	491	818	818	588	407	815	815	610	421	801	801	588	429
5134	722	554	502	502	435	377	553	553	479	339	549	549	475	310	552	552	463	284	537	537	467	314
5135	177	177	167	167	104	75	160	160	101	68	156	146	97	58	145	145	101	72	163	146	97	58
5136	674	519	480	480	317	243	461	461	321	243	441	419	301	206	420	420	298	218	458	418	301	206
5137	443	443	443	443	436	436	442	442	434	434	444	444	430	430	443	443	436	436	444	444	430	430
5138	655	522	508	508	337	296	522	512	340	195	522	506	317	175	522	514	329	176	504	504	312	175

Table L-34

Estimated Changes in Hairy Woodpecker Habitat Capability Due to Changes in Vegetative Conditions, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	91	90	90	90	84	91	90	90	87	90	90	89	82	91	90	89	87	91	90	89	87
303	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	88	85	79	77	52	84	78	75	51	80	79	77	49	80	75	72	41	81	78	76	49
406	82	85	79	76	50	81	76	71	45	76	74	70	35	77	72	68	30	79	74	71	36
407	98	99	99	97	92	94	93	83	54	94	94	81	41	91	91	80	49	94	94	81	42
408	94	94	94	94	87	94	94	94	87	94	94	94	87	94	94	94	80	94	94	94	87
509	93	93	91	85	74	93	93	88	75	93	93	87	68	91	90	86	71	93	92	86	66
510	70	64	56	54	44	60	59	55	41	59	56	52	31	56	53	48	29	63	57	53	34
511	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
612	97	100	100	80	50	100	100	70	48	96	96	62	30	98	98	93	37	94	94	74	32
613	92	93	93	90	87	93	93	89	87	99	99	69	40	96	96	94	80	97	97	79	42
614	100	100	100	82	68	100	100	83	68	100	100	65	31	100	100	99	68	100	100	66	31
715	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
716	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	90	80	62	42	92	90	72	57	105	103	91	77
901	94	94	93	54	52	96	94	51	48	99	83	38	30	98	82	41	28	98	85	48	45
902	100	100	100	99	98	100	100	99	98	100	100	97	96	100	100	97	96	100	100	100	100
1003	49	25	24	21	17	26	26	21	16	24	21	18	12	22	14	9	2	46	28	17	12
1105	99	98	98	80	64	98	98	96	92	98	87	59	37	95	85	63	34	97	87	61	41
1106	100	92	92	87	86	88	84	65	54	87	75	59	50	74	46	17	8	98	97	95	95
1107	93	93	93	85	83	93	91	79	71	93	77	57	47	93	76	58	52	91	84	72	63
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	99	94	83	78	99	94	85	80	100	85	60	43	93	74	46	29	100	94	84	80
1210	100	100	92	78	75	99	91	74	65	100	86	63	50	89	73	37	20	100	86	63	50
1211	99	90	86	75	40	92	85	74	39	89	83	71	34	86	79	65	21	98	85	73	34
1212	98	98	94	82	81	98	93	82	81	98	82	51	42	98	98	94	93	97	81	61	60
1213	99	94	91	86	79	94	92	87	81	87	68	54	44	89	79	72	66	85	67	54	44
1214	80	79	73	63	41	79	73	63	41	92	61	40	24	81	56	36	19	89	60	41	24
1315	51	51	40	23	18	51	38	23	18	49	34	19	14	52	37	17	11	47	35	19	14
1316	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1317	45	42	41	38	32	41	39	36	30	38	34	22	14	33	30	21	16	35	33	22	14

Table L-34 (continued)
Estimated Changes in Hairy Woodpecker Habitat Capability Due to Changes in Vegetative Conditions, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	89	92	78	40	28	96	90	43	31	89	73	40	20	88	83	45	24	86	71	32	16
1319	69	73	64	48	37	72	60	40	28	65	47	28	13	71	64	42	30	61	52	36	23
1323	94	95	88	69	63	95	92	69	63	93	85	68	58	88	84	58	44	92	85	66	58
1332	67	69	65	52	46	72	69	51	41	74	62	38	24	70	62	41	31	71	62	37	24
1420	43	41	32	18	11	41	28	18	11	40	25	14	6	38	30	13	4	32	25	14	6
1421	65	67	54	41	34	69	52	34	25	65	51	29	18	64	49	22	11	61	53	34	25
1422	49	48	38	30	28	45	28	21	20	34	26	19	18	38	25	11	9	46	32	16	15
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	48	22	18	17	14	22	22	17	14	19	15	14	10	18	14	11	4	37	18	16	10
1526	90	88	88	87	87	82	80	76	74	81	76	73	70	80	75	69	66	80	76	73	70
1527	64	58	47	40	32	57	48	39	29	55	41	30	17	54	42	25	11	45	42	34	22
1528	81	77	73	71	68	74	70	66	61	63	54	46	37	66	55	46	36	61	56	51	43
1529	63	56	47	43	35	52	44	37	26	53	42	33	22	57	45	35	23	46	38	32	22
1530	43	49	35	24	13	51	38	26	13	51	37	25	12	51	38	19	5	39	35	25	12
1531	54	44	35	29	28	45	36	30	28	39	31	24	22	31	18	7	4	45	34	26	24
1601	100	96	96	70	58	97	97	72	58	96	96	65	40	95	95	67	55	99	94	67	40
1602	99	99	99	99	99	99	99	99	99	99	99	99	99	97	97	76	68	102	102	82	74
1603	90	79	79	72	68	78	77	70	63	78	75	66	57	76	74	64	58	77	76	70	63
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	58	56	56	48	42	57	55	41	30	56	52	40	28	56	52	39	30	55	54	42	30
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	89	84	72	64	93	92	68	57	96	96	62	36	95	95	69	51	100	97	66	40
1811	99	92	90	84	81	94	94	85	80	92	92	77	66	93	93	83	76	95	94	85	77
1812	97	96	96	91	89	96	95	92	90	96	95	87	81	96	96	89	85	92	91	87	82
1813	57	57	57	57	57	57	57	57	57	56	55	47	43	57	57	53	50	57	57	45	44
1814	95	93	93	84	79	94	92	85	79	95	94	84	77	95	94	82	74	89	87	84	77
1815	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1816	100	93	86	66	54	100	97	77	54	99	94	72	48	95	90	64	40	90	85	71	51
1817	100	100	100	84	72	100	100	85	72	100	100	58	31	100	100	97	71	100	100	65	40
1901	89	82	80	61	54	72	68	57	50	68	60	47	36	67	56	46	32	79	73	48	36
1902	83	78	71	53	41	85	81	62	41	85	80	59	37	91	85	55	24	76	72	57	37
1903	81	81	80	59	47	80	72	56	43	80	68	46	33	77	64	46	31	82	69	48	35
1904	62	62	58	57	52	62	58	56	53	59	52	42	29	53	37	31	15	59	53	41	32
1905	57	51	40	33	23	51	37	27	23	51	33	23	22	49	29	20	17	54	36	23	22
1906	39	37	35	35	33	37	35	33	33	36	32	27	24	32	25	11	3	39	39	34	34
1910	98	99	98	95	93	97	96	94	93	98	96	93	91	97	95	92	88	100	99	94	91
2007	64	62	57	45	39	60	48	40	34	61	44	34	27	63	44	32	25	64	48	38	32
2008	100	100	100	100	100	98	84	61	47	91	79	52	36	100	91	63	48	87	87	62	47

Table L-34 (continued)
Estimated Changes in Hairy Woodpecker Habitat Capability Due to Changes in Vegetative Conditions, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	85	85	85	85	85	75	75	75	75	41	41	41	41	84	84	84	84	59	59	49	49
2203	90	90	90	90	90	90	90	90	90	87	87	87	87	90	90	90	90	89	89	87	87
2304	91	85	85	85	85	85	85	85	85	82	82	82	82	82	82	64	59	84	84	82	82
2305	98	96	93	55	46	96	93	72	46	92	92	60	42	95	94	61	53	93	93	48	40
2306	84	85	78	45	35	85	78	62	35	82	82	54	31	79	77	42	33	79	72	43	31
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	71	71	100	100	100	99	84	84	100	100	82	52	100	99	83	83	100	100	89	64
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	99	98	97	97	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	94	84	100	100	91	80	100	100	94	80	100	100	76	73	100	100	88	84
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	95	80	100	100	93	77	100	100	95	75	100	100	75	72	100	100	84	77
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	75	40	40	40	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	97	59	59	59	100	100	100	100
2722	100	100	100	99	99	100	100	99	99	100	100	100	97	100	100	97	97	100	100	100	97
2823	100	76	75	74	73	78	76	75	71	50	50	50	50	53	48	47	41	50	50	50	50
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	77	77	48	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	100	99	100	87	99	97	74	70	95	95	71	67	100	97	85	65	90	85	70	67
2927	100	100	93	91	88	100	96	91	88	87	82	50	41	100	97	90	87	92	87	58	43
3001	65	64	64	61	61	61	61	58	58	41	37	33	33	41	41	39	38	48	47	47	46
3002	49	49	49	44	44	47	47	43	43	43	41	40	40	43	43	41	40	46	46	46	46
3003	86	74	74	71	69	72	72	66	66	58	54	51	49	63	63	61	57	66	66	64	60
3104	57	56	56	54	53	55	55	53	52	43	39	33	32	42	41	41	40	45	42	39	36
3105	98	90	90	90	90	92	92	92	92	68	68	68	68	65	65	64	64	90	90	90	90
3206	100	100	100	100	100	100	100	100	100	99	99	99	99	73	73	73	73	99	99	99	99
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	59	55	49	45	33	52	49	44	33	45	42	37	29	58	51	40	28	53	45	38	29
3309	100	100	94	91	75	97	89	86	75	91	81	76	75	100	92	88	73	80	80	77	75
3310	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
3311	93	93	93	93	93	78	78	73	69	74	66	58	58	66	62	55	51	65	65	58	58
3312	90	74	74	59	59	71	71	59	59	59	52	47	47	46	46	43	40	53	53	53	49
3313	56	43	43	29	27	43	43	29	27	26	26	24	23	45	38	23	19	41	33	25	23
3314	82	70	70	63	63	69	69	62	62	49	43	39	39	39	39	36	33	45	45	45	43
3315	82	65	61	53	49	58	58	50	49	58	55	49	47	68	65	40	37	67	56	49	48
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-34 (continued)
Estimated Changes in Hairy Woodpecker Habitat Capability Due to Changes in Vegetative Conditions, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	100	100	100	100	100	100	100	100	100	98	98	98	98	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	87	87	87	87	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	97	97	97	97	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	99	99	98	98	100	100	100	100	96	96	96	96	100	100	100	100	100	100	100	100
3523	88	87	87	87	86	86	83	80	76	85	76	73	65	74	71	61	49	83	66	57	46
3524	100	97	92	71	57	94	88	68	56	94	85	64	39	99	93	68	56	77	77	60	39
3525	72	63	63	54	45	67	61	52	41	71	54	47	30	59	59	47	32	59	50	41	30
3526	74	68	68	64	61	69	65	59	54	57	56	51	45	63	59	50	40	69	52	41	34
3551	75	76	72	55	44	74	69	53	42	73	66	49	28	78	71	42	27	60	60	45	28
3627	81	73	67	63	52	70	67	62	51	63	60	55	48	74	69	60	50	70	62	56	48
3628	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
3629	86	87	83	82	75	84	79	77	70	80	75	73	72	87	79	73	58	65	65	50	49
3630	100	99	99	99	98	96	93	90	85	83	72	67	59	72	64	52	41	95	73	66	57
3731	88	77	75	70	68	73	73	69	68	67	64	59	58	70	68	47	45	80	76	73	72
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	81	81	81	81	100	100	100	100
3835	100	99	89	87	62	94	85	83	61	100	100	75	38	100	87	81	66	90	90	72	33
3836	100	99	98	98	97	98	97	97	95	98	95	78	58	97	82	77	64	85	85	76	57
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	97	97	97	97	97	94	87	82	75	92	81	74	66	90	83	80	73	85	83	75	70
4252	100	100	100	100	100	100	87	76	61	100	78	65	48	93	69	66	47	86	83	67	58
4253	78	78	78	78	78	79	64	54	40	80	63	54	42	73	53	47	32	67	64	51	43
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	71	71	71	71	71	65	65	65	65	27	27	27	27	71	71	71	71	36	36	27	27

Table L-34 (continued)

Estimated Changes in Hairy Woodpecker Habitat Capability Due to Changes in Vegetative Conditions, Expressed in Percent of 1954 Habitat Capability (1954 = 100 percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	99	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	99	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	98	99	96	96	96	98	97	96	96	97	97	97	96	96	96	96	96	98	98	97	96
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	88	94	87	86	84	85	75	72	66	87	85	79	42	71	70	65	51	87	87	84	50
4607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5012	74	68	57	48	36	64	54	46	38	57	48	39	29	56	49	40	31	57	51	46	37
5013	97	96	91	85	81	99	96	83	80	96	96	77	72	90	86	47	25	95	93	78	72
5014	95	84	74	57	48	91	86	57	49	84	84	53	44	84	80	43	32	83	79	53	44
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	99	98	98	98	97	99	99	99	99	99	99	99	99	98	98	97	97	99	99	99	99
5017	100	100	100	100	100	100	100	90	80	100	100	88	77	97	96	80	68	100	100	100	100
5018	91	91	83	72	66	96	92	72	63	90	90	71	66	91	89	54	36	90	87	71	66
5130	98	87	87	76	71	87	87	77	69	85	85	73	63	84	84	66	51	86	85	73	63
5131	77	75	75	61	56	74	74	61	55	72	71	57	50	72	72	50	35	73	71	58	50
5132	49	57	57	36	29	54	54	35	26	54	53	35	24	52	52	32	22	56	53	35	24
5133	98	98	98	98	98	95	95	75	56	93	93	67	46	93	93	69	48	91	91	67	49
5134	77	70	70	60	52	77	77	66	47	76	76	66	43	76	76	64	39	74	74	65	43
5135	100	94	94	59	42	90	90	57	38	88	82	55	33	82	82	57	41	92	82	55	33
5136	77	71	71	47	36	68	68	48	36	65	62	45	31	62	62	44	32	68	62	45	31
5137	100	100	100	98	98	100	100	98	98	100	100	97	97	100	100	98	98	100	100	97	97
5138	80	78	78	51	45	80	78	52	30	80	77	48	27	80	78	50	27	77	77	48	27

Table L-35

Estimated Changes in Red-breasted Sapsucker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	3613	3525	3519	3509	3509	3271	3519	3509	3509	3354	3516	3506	3489	3212	3519	3509	3491	3338	3519	3509	3492	3343
303	2189	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106	2106
404	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385	14385
405	5100	4907	4838	4657	4519	3283	4826	4628	4481	3219	4662	4579	4510	3096	4687	4427	4348	2752	4716	4569	4501	3114
406	10490	9853	10128	9696	9373	6358	9818	9401	8884	5673	9487	9164	8943	4754	9529	8832	8619	4067	9690	9131	8921	4910
407	3689	3666	3666	3666	3666	3474	3636	3618	3485	2233	3636	3636	3480	1805	3636	3636	3383	2019	3636	3636	3491	1837
408	1202	1167	1167	1167	1167	1067	1167	1167	1167	1067	1167	1167	1167	1067	1167	1167	1167	954	1167	1167	1167	1067
509	6419	6292	6121	5985	5797	4791	6245	6223	6042	4906	6288	6209	6059	4500	6123	5995	5881	4586	6265	6141	5983	4373
510	14226	12603	12065	11058	10480	8534	11810	11735	10799	8077	11655	10749	10443	6436	11141	10135	9820	6110	12053	10796	10487	6929
511	3442	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434	3434
612	6522	6469	6469	6469	6015	3727	6469	6469	5645	3639	6469	6469	5436	2624	6469	6469	6469	2927	6469	6469	5865	2721
613	4541	4461	4501	4501	4440	4255	4499	4499	4410	4248	4584	4584	3853	2202	4467	4467	4446	3853	4523	4523	4101	2279
614	1365	1365	1365	1365	1259	996	1365	1365	1265	996	1365	1365	1074	498	1365	1365	1365	996	1365	1365	1098	516
715	7399	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379	7379
716	13524	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478	13478
717	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036	6036
718	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276	4276
719	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694	8694
820	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789	4789
821	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802	8802
822	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212	25212
823	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723	16723
824	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739	5739
825	4636	4636	4636	4636	4636	4636	4636	4636	4636	4636	4636	4636	4636	4636	4639	4639	4636	4636	4636	4636	4636	4636
826	1436	1436	1436	1436	1436	1436	1436	1436	1436	1436	1234	1190	927	682	1215	1205	1043	911	1436	1436	1264	1109
901	4075	4013	3931	3920	2571	2411	4016	3998	2478	2235	4146	3877	1843	1395	4062	3816	2279	1312	4060	3899	2310	2063
902	11392	11392	11368	11353	11215	11184	11383	11376	11214	11184	11326	11277	11050	10859	11362	11361	11108	10793	11392	11392	11392	11392
1003	5399	3707	2093	2048	1555	1416	2218	2218	1569	1396	2061	1768	1274	992	2131	1258	655	349	3525	2350	1235	992
1105	11514	11469	11355	11345	9532	8144	11395	11388	11227	10943	11331	10910	7229	5076	10933	10565	8413	4768	11155	10821	7322	5508
1106	628	628	627	627	562	558	617	607	421	364	627	582	377	349	622	516	143	109	628	628	614	611
1107	12218	11927	11892	11881	10249	10052	11987	11870	9664	8893	11972	10971	6433	5748	11778	10572	6253	5816	12024	11611	8885	8298
1108	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715	6715
1209	6440	6440	6430	6324	5472	5348	6381	6279	5512	5404	6431	6142	4115	3507	6160	5801	3214	2507	6435	6319	5488	5381
1210	7650	7650	7634	7452	5959	5846	7601	7397	5551	5128	7656	7305	4932	4309	7336	6946	3047	2059	7657	7306	4930	4309
1211	4127	4097	3718	3639	2902	1887	3826	3620	2792	1764	3698	3565	2688	1604	3511	3352	2337	1085	4083	3604	2728	1604
1212	2455	2447	2448	2318	2005	1990	2436	2301	1997	1982	2449	2369	1507	1221	2445	2443	2358	2346	2449	2227	1655	1629
1213	2834	2816	2708	2621	2297	2124	2720	2635	2353	2215	2748	2465	1591	1349	2656	2522	2055	1923	2707	2400	1556	1349
1214	6095	5606	5379	5230	4256	3366	5373	5213	4251	3396	5614	4796	2594	2005	5262	4618	2392	1757	5502	4738	2618	2005
1315	7337	5620	5413	4931	2561	2225	5406	4761	2535	2209	5313	4665	2202	1875	5435	4903	1962	1581	5164	4745	2196	1892
1316	3117	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107	3107
1317	5043	3706	3660	3625	3127	2742	3614	3577	3186	2575	3587	3386	2045	1508	3212	3132	2068	1678	3349	3298	2033	1538
1318	4226	4063	4063	4063	2091	1611	4063	4063	2075	1601	4063	4063	2544	1229	4063	4063	2883	1364	4063	4032	1801	1152

Table L-35 (continued)

Estimated Changes in Red-breasted Sapsucker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	9721	8410	8694	8125	5922	4598	8608	7771	4899	3670	8030	7024	4021	2176	8553	8226	5162	3937	7720	7272	4673	3178
1323	2934	2878	2790	2727	2130	1994	2859	2826	2128	1994	2784	2689	2242	1868	2701	2666	2207	1623	2740	2673	2049	1868
1332	5479	4900	4897	4818	3847	3550	4882	4814	3544	3042	4785	4462	2812	1897	4688	4508	3260	2469	4580	4391	2471	1897
1420	4258	2849	2910	2598	1268	928	2929	2381	1278	940	2880	2291	1039	666	2806	2565	965	590	2492	2313	1022	682
1421	9792	8204	8712	7809	5193	4449	8827	7681	4112	3172	8245	7522	3509	2517	8369	7663	2794	1691	8064	7687	3955	3044
1422	12952	9590	8607	7902	6262	6118	8046	6476	4756	4627	6846	6257	4466	4344	7809	6914	2547	2118	8946	7979	3672	3223
1524	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336	1336
1525	4742	2873	1390	1251	1002	898	1392	1392	997	893	1241	1065	832	684	1223	1028	637	374	2382	1165	933	684
1526	6906	6650	6620	6601	6557	6544	6344	6264	5923	5808	6209	6040	5696	5524	6156	5881	5434	5254	6158	6017	5684	5497
1527	4165	3455	3432	3105	2433	1940	3400	3105	2298	1795	3343	2915	2145	1196	3413	2807	1734	949	2791	2734	2294	1456
1528	2342	2165	2017	1970	1873	1809	1973	1925	1775	1673	1749	1648	1366	1195	1847	1724	1349	1176	1713	1660	1464	1309
1529	7330	5754	5107	4712	3900	3374	4857	4526	3386	2588	4947	4432	2941	2108	5424	4843	2979	2158	4391	4053	2887	2099
1530	6542	4931	4872	4203	2769	1804	4910	4327	2706	1767	4829	4211	2947	1609	4824	3909	2117	925	3990	3876	2961	1597
1531	4361	3055	2708	2437	1788	1746	2858	2484	1825	1746	2546	2273	1564	1481	2328	1763	464	353	3033	2665	1678	1597
1601	4780	4780	4713	4713	3553	2702	4717	4717	3579	2702	4719	4719	3256	1970	4681	4681	3456	2591	4765	4656	3489	1966
1602	5908	5890	5890	5890	5890	5890	5890	5890	5890	5890	5890	5890	5890	5890	5890	5890	4974	4164	5890	5890	5232	4430
1603	3223	3156	2917	2917	2770	2605	2985	2937	2739	2482	2943	2875	2630	2233	2940	2871	2640	2348	2930	2924	2763	2441
1604	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
1605	4657	4118	4244	4244	3896	3508	4256	4088	3386	2473	4172	3998	3369	2347	4199	4006	3368	2563	4104	4084	3547	2473
1706	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074	2074
1707	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113	4113
1708	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800	6800
1809	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007	2007
1810	3774	3774	3576	3201	2928	2605	3552	3451	2911	2341	3763	3763	2966	1552	3674	3674	3086	2084	3881	3839	3125	1711
1811	4575	4557	4452	4240	4085	3902	4453	4406	4156	3892	4484	4484	4067	3329	4496	4496	4210	3723	4585	4569	4308	3790
1812	5594	5559	5491	5446	5279	5118	5508	5448	5349	5210	5480	5434	5136	4749	5538	5528	5319	5038	5372	5330	5173	4805
1813	6556	5912	5912	5912	5912	5912	5912	5912	5912	5912	5825	5786	5109	4811	5933	5913	5524	5316	5926	5926	5081	4926
1814	4610	4560	4554	4468	4219	4005	4565	4438	4242	4005	4613	4602	4314	3944	4601	4588	4285	3879	4470	4451	4314	3944
1815	3138	3135	3135	3134	3133	3132	3134	3134	3133	3132	3135	3135	3134	3132	3135	3135	3134	3132	3134	3134	3134	3132
1816	3066	3066	2825	2503	2145	1836	3047	2989	2631	1836	2972	2915	2499	1708	2955	2900	2399	1548	2901	2845	2501	1783
1817	6360	6360	6360	6360	5819	4578	6360	6360	5851	4575	6360	6360	4950	2178	6360	6360	6345	4438	6360	6360	5172	2625
1901	11629	11311	10397	9886	7979	7159	9412	9158	7648	6937	9914	8754	6729	5405	9918	8224	6527	4571	10445	10009	7081	5411
1902	1202	1175	1115	975	820	687	1175	1175	1031	687	1173	1147	960	603	1135	1104	822	341	1134	1107	943	603
1903	10852	10347	10104	9887	8345	6488	9938	9333	8110	6031	9887	8796	7177	4890	9471	8628	7230	4872	10003	8981	7358	5076
1904	2353	1982	1955	1873	1814	1705	1953	1868	1808	1726	1829	1653	1342	1028	1699	1325	1027	644	1885	1700	1358	1122
1905	11694	10135	9792	8858	7253	4612	9792	7454	5531	4612	9342	7094	4999	4510	9060	6679	4866	3993	9660	7332	5230	4510
1906	1605	1258	1193	1157	1120	1106	1177	1157	1112	1106	1132	1079	886	843	1037	944	232	119	1252	1252	1117	1114
1910	8707	8675	8493	8434	8210	8114	8389	8360	8193	8114	8375	8231	7978	7813	8316	8060	7804	7510	8450	8397	8047	7847
2007	11455	10139	10450	9328	7863	6463	10396	8534	7299	5772	10194	8202	6883	4865	10404	8038	6636	4591	10522	8557	7355	5552
2008	1241	1241	1241	1241	1241	1241	1127	1055	866	599	1086	1021	815	511	1106	1028	821	542	1083	1083	889	599
2202	1906	1821	1821	1821	1821	1821	1559	1559	1558	1556	931	931	926	926	1791	1791	1791	1791	1201	1201	1130	1130
2203	3363	3285	3281	3281	3281	3281	3281	3281	3281	3281	3219	3219	3219	3219	3285	3285	3285	3285	3233	3233	3219	3219

Table L-35 (continued)

Estimated Changes in Red-breasted Sapsucker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	2958	2886	2723	2723	2720	2719	2720	2720	2720	2719	2658	2658	2657	2657	2552	2552	2237	2135	2677	2677	2657	2657
2305	5150	5128	4220	4177	2905	2782	4220	4177	3457	2782	3897	3897	2936	2437	4298	4288	3182	3066	4029	4029	2690	2328
2306	3245	3060	2753	2618	1568	1409	2753	2618	2003	1409	2560	2560	1828	1175	2625	2603	1486	1387	2467	2310	1585	1181
2408	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045
2409	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559	1559
2410	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163	1163
2411	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797	1797
2412	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469	469
2413	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976	976
2514	3148	3148	3148	3148	3141	3141	3148	3148	2695	2673	3148	3148	2104	1569	3148	3148	2669	2640	3148	3148	2457	1947
2515	3992	3992	3992	3992	3992	3992	3992	3992	3992	3992	3992	3992	3992	3992	3967	3965	3882	3853	3992	3992	3992	3992
2516	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
2517	1929	1929	1981	1981	1852	1629	1938	1938	1788	1533	1945	1945	1756	1533	1900	1900	1481	1407	1927	1927	1671	1629
2518	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750	3750
2519	2863	2863	2863	2863	2808	2300	2863	2863	2708	2196	2863	2863	2626	2142	2863	2863	2208	2074	2863	2863	2329	2221
2620	185	185	185	185	185	185	185	185	185	185	185	185	185	185	157	123	123	123	185	185	185	185
2621	528	528	528	528	528	528	528	528	528	528	528	528	528	528	427	320	320	320	528	528	528	528
2722	2847	2845	2845	2845	2814	2814	2845	2845	2814	2814	2845	2845	2814	2757	2845	2844	2752	2743	2845	2845	2845	2757
2823	13131	13131	10548	10508	10453	10397	10490	10433	10378	10246	7733	7733	7720	7700	7411	7252	7215	6983	7720	7720	7720	7700
2824	1880	1880	1882	1882	1882	1879	1882	1882	1882	1879	1879	1879	1879	1879	1876	1769	1769	1320	1879	1879	1879	1879
2825	5718	5718	5718	5718	5718	5718	5718	5718	5718	5718	5718	5718	5718	5718	5725	5725	5717	5697	5718	5717	5711	5711
2926	12157	12157	12294	12240	11391	10636	11578	11504	9481	8061	10048	10048	8047	7760	12199	12109	10887	7419	9677	9277	7981	7764
2927	11571	11571	11571	11205	10970	10269	11571	11513	10967	10234	9471	9275	6079	5310	11571	11571	10659	10072	9744	9311	6506	5505
3001	6653	6035	5815	5815	5649	5649	5575	5575	5346	5344	3778	3470	3351	3261	4124	4116	4048	3788	4510	4498	4485	4279
3002	2923	2545	2454	2454	2265	2265	2379	2379	2219	2219	2207	2134	2112	2060	2225	2225	2174	2075	2439	2439	2439	2342
3003	4634	4506	3824	3824	3616	3599	3677	3677	3418	3408	2983	2799	2771	2664	3212	3212	3170	2927	3425	3425	3385	3191
3104	5524	4831	4856	4856	4637	4519	4783	4783	4537	4381	3368	3028	2808	2724	3480	3457	3437	3250	3679	3568	3441	3087
3105	3583	3573	3389	3389	3378	3378	3444	3444	3433	3433	2711	2708	2708	2697	2609	2609	2601	2584	3393	3393	3393	3382
3206	2890	2890	2890	2890	2890	2890	2890	2890	2890	2890	2883	2883	2883	2883	2065	2065	2065	2065	2883	2883	2883	2883
3207	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475	5475
3308	10958	9242	8193	7707	6786	5091	7905	7636	6592	5004	6619	6363	5763	4493	8331	7697	6156	4403	7378	6592	5847	4493
3309	3513	3513	3446	3347	3271	2622	3267	3169	3073	2622	2907	2738	2626	2622	3466	3347	3238	2577	2724	2722	2679	2622
3310	4531	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379	4379
3311	4108	4058	4058	4058	4058	4058	3255	3254	3138	3063	3013	2826	2557	2538	2644	2562	2436	2308	2850	2850	2569	2531
3312	1623	1603	1208	1208	1073	1073	1184	1184	1073	1073	972	906	884	871	820	819	804	731	965	965	965	904
3313	6673	5720	3890	3890	2943	2851	3890	3890	2937	2851	2902	2879	2789	2438	3705	3376	2584	2152	3603	3235	2812	2438
3314	3002	2892	2448	2448	2262	2262	2412	2412	2259	2259	1642	1497	1449	1420	1463	1462	1433	1286	1654	1654	1654	1523
3315	4325	4122	2902	2793	2486	2427	2708	2706	2452	2427	2924	2836	2464	2341	2817	2745	2097	1919	2961	2691	2498	2373
3416	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614	3614
3417	5561	5561	5561	5561	5561	5561	5561	5561	5561	5561	5464	5464	5464	5463	5561	5561	5561	5561	5561	5561	5561	5561
3418	4460	4460	4460	4460	4460	4460	4460	4460	4460	4460	3952	3952	3952	3944	4460	4460	4460	4460	4460	4460	4460	4460
3419	3882	3882	3882	3882	3882	3882	3882	3882	3882	3882	3712	3712	3712	3710	3882	3882	3882	3882	3882	3882	3882	3882

Table L-35 (continued)

Estimated Changes in Red-breasted Sapsucker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665	2665
3421	3090	3090	3038	3038	3005	3005	3090	3090	3090	3090	2930	2930	2930	2928	3093	3093	3087	3087	3086	3086	3086	3086
3523	4404	4249	4228	4228	4197	4162	4228	4158	3956	3748	3910	3637	3464	3101	3870	3788	3106	2449	3386	2943	2692	2023
3524	1284	1284	1232	1205	955	844	1200	1173	937	832	1145	1100	793	574	1237	1205	948	832	916	916	766	574
3525	7509	6855	6584	6584	5611	4531	6801	6488	5415	4102	6504	5655	4718	3046	6433	6431	4858	3233	5080	4627	4174	2908
3526	3962	3626	3492	3492	3178	3049	3484	3384	2955	2715	2819	2771	2545	2246	3273	3176	2550	2045	2887	2414	2025	1601
3551	6122	5681	5769	5613	4135	3480	5591	5422	3952	3292	5586	5305	3393	2019	5825	5531	3219	2174	4158	4158	3223	2019
3627	3063	2856	2535	2412	2179	1749	2459	2391	2126	1725	2130	2068	1924	1618	2516	2378	2041	1659	2313	2123	1944	1618
3628	3568	3538	3540	3537	3535	3528	3538	3538	3538	3538	3531	3530	3529	3528	3535	3534	3532	3528	3532	3531	3530	3529
3629	8029	7762	7790	7649	7541	6618	7374	7168	6966	6021	6916	6644	6464	6458	7558	7234	6851	4862	4958	4952	4293	4109
3630	2917	2917	2890	2890	2885	2868	2799	2756	2640	2530	2452	2228	2196	2046	2470	2352	1982	1672	2684	2344	2236	1978
3731	4036	3908	3364	3314	3174	3147	3269	3268	3150	3139	3131	3071	2815	2731	3028	2976	2514	2386	3547	3451	3382	3338
3732	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769	1769
3733	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988	8988
3734	6811	6811	6811	6811	6811	6811	6811	6811	6811	6811	6811	6811	6811	6811	5622	5622	5622	5622	6811	6811	6811	6811
3835	2832	2832	2828	2768	2689	1892	2714	2659	2580	1851	2744	2715	1846	1282	2709	2539	2342	1977	1957	1957	1645	1080
3836	5216	5216	5229	5219	5206	5076	5199	5184	5163	4965	5443	5393	3914	2953	5315	4872	4359	3404	4286	4286	3795	2908
3837	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064	4064
3938	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741	8741
3939	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181	7181
3940	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362	6362
4041	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736	5736
4042	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468	6468
4043	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366	9366
4044	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140	4140
4054	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896	6896
4055	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465	7465
4145	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419	5419
4146	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167	4167
4147	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457	3457
4148	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213	4213
4149	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720	3720
4150	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866	2866
4222	6393	6323	6323	6323	6323	6323	6372	6056	5653	5177	6184	5671	5188	4811	6177	5905	5603	5135	5614	5493	5198	4979
4252	1516	1516	1516	1516	1516	1516	1516	1360	1156	954	1422	1187	1028	841	1446	1216	1086	831	1178	1156	1009	911
4253	2902	2654	2654	2654	2654	2654	2666	2332	1914	1504	2441	2064	1838	1547	2458	2055	1741	1244	2113	2028	1786	1596
4256	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804	1804
4302	396	338	338	338	338	338	315	315	315	315	172	172	171	171	338	338	338	338	195	195	171	171
4304	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	0	0	0	5	5	5	5
4407	1259	1259	1259	1259	1259	1259	1259	1259	1259	1259	1259	1259	1259	1259	1238	1238	1238	1238	1259	1259	1259	1259
4408	2807	2807	2807	2807	2807	2807	2807	2807	2807	2807	2807	2807	2807	2807	2803	2803	2803	2803	2807	2807	2807	2807
4503	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3469	3467	3466	3461	3472	3472	3472	3472

Table L-35 (continued)

Estimated Changes in Red-breasted Sapsucker Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171	171
4505	1462	1454	1460	1452	1450	1449	1456	1453	1451	1449	1455	1455	1454	1447	1453	1453	1450	1447	1456	1456	1454	1447
4506	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838	1838
4508	7267	6834	7169	6870	6756	6668	6836	6447	6104	5886	6804	6727	6333	4459	6366	6332	5702	5160	6845	6845	6529	4813
4607	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
5012	17012	14897	14647	12795	11142	8131	13931	12417	10288	8552	12682	11116	8980	6674	12634	11493	9209	7243	12641	11446	10257	8491
5013	7195	7143	6989	6777	6356	5977	7100	6996	6258	5853	6909	6909	5850	5242	6565	6361	3859	2156	6883	6712	5869	5278
5014	4952	4865	4610	4162	3273	2473	4897	4700	3310	2545	4676	4676	3145	2265	4749	4604	2807	1768	4631	4379	3137	2265
5015	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281	2281
5016	8485	8447	8431	8407	8361	8319	8447	8447	8447	8447	8447	8447	8447	8447	8432	8427	8356	8315	8447	8447	8447	8447
5017	14436	14436	14436	14435	14433	14432	14449	14449	13483	11104	14459	14459	13359	10600	14233	14176	12820	9713	14417	14416	14408	14403
5018	4553	4448	4387	4197	3796	3446	4542	4457	3796	3307	4386	4386	3788	3446	4408	4353	3307	2249	4372	4274	3785	3446
5130	9043	8995	8596	8596	7471	6851	8546	8546	7591	6707	8214	8203	7261	6122	8221	8221	6883	5287	8261	8192	7234	6119
5131	5667	5359	5436	5436	4360	3878	5366	5366	4459	3802	5138	5127	4311	3523	5216	5216	4032	2735	5201	5132	4320	3540
5132	3108	2645	2874	2874	1927	1479	2831	2831	1970	1345	2685	2673	1979	1282	2784	2784	1983	1285	2751	2682	1983	1282
5133	9357	9309	9309	9309	9303	9302	9029	9029	7835	5927	8843	8843	7388	5216	8890	8890	7576	5463	8795	8795	7443	5481
5134	8124	7722	7416	7416	6603	5856	7456	7456	6734	5388	7421	7421	6756	5151	7437	7437	6569	4906	7359	7359	6664	5202
5135	2881	2881	2683	2683	2079	1643	2608	2608	2042	1521	2477	2453	1997	1406	2549	2549	2100	1649	2549	2453	1997	1406
5136	5356	5020	5176	5176	3634	2520	5083	5083	3749	2520	4772	4716	3619	2201	4797	4797	3566	2330	4946	4717	3622	2206
5137	4461	4461	4466	4466	4396	4396	4472	4472	4391	4391	4467	4467	4330	4330	4466	4466	4396	4396	4467	4467	4330	4330
5138	5628	5341	5355	5354	3786	3248	5740	5599	4377	2493	5613	5502	4219	2308	5631	5494	4240	2317	5522	5522	4220	2312

Table L-36

Estimated Changes in Red-breasted Sapsucker Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	98	97	97	97	91	97	97	97	93	97	97	97	89	97	97	97	92	97	97	97	93
303	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	96	95	91	89	64	95	91	88	63	91	90	88	61	92	87	85	54	92	90	88	61
406	94	97	92	89	61	94	90	85	54	90	87	85	45	91	84	82	39	92	87	85	47
407	99	99	99	99	94	99	98	94	61	99	99	94	49	99	99	92	55	99	99	95	50
408	97	97	97	97	89	97	97	97	89	97	97	97	89	97	97	97	79	97	97	97	89
509	98	95	93	90	75	97	97	94	76	98	97	94	70	95	93	92	71	98	96	93	68
510	89	85	78	74	60	83	82	76	57	82	76	73	45	78	71	69	43	85	76	74	49
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	99	99	99	92	57	99	99	87	56	99	99	83	40	99	99	99	45	99	99	90	42
613	98	99	99	98	94	99	99	97	94	101	101	85	48	98	98	98	85	100	100	90	50
614	100	100	100	92	73	100	100	93	73	100	100	79	36	100	100	100	73	100	100	80	38
715	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	86	83	65	47	85	84	73	63	100	100	88	77
901	98	96	96	63	59	99	98	61	55	102	95	45	34	100	94	56	32	100	96	57	51
902	100	100	100	98	98	100	100	98	98	99	99	97	95	100	100	98	95	100	100	100	100
1003	69	39	38	29	26	41	41	29	26	38	33	24	18	39	23	12	6	65	44	23	18
1105	100	99	99	83	71	99	99	98	95	98	95	63	44	95	92	73	41	97	94	64	48
1106	100	100	100	89	89	98	97	67	58	100	93	60	56	99	82	23	17	100	100	98	97
1107	98	97	97	84	82	98	97	79	73	98	90	53	47	96	87	51	48	98	95	73	68
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	98	85	83	99	98	86	84	100	95	64	54	96	90	50	39	100	98	85	84
1210	100	100	97	78	76	99	97	73	67	100	95	64	56	96	91	40	27	100	96	64	56
1211	99	90	88	70	46	93	88	68	43	90	86	65	39	85	81	57	26	99	87	66	39
1212	100	100	94	82	81	99	94	81	81	100	96	61	50	100	100	96	96	100	91	67	66
1213	99	96	92	81	75	96	93	83	78	97	87	56	48	94	89	73	68	96	85	55	48
1214	92	88	86	70	55	88	86	70	56	92	79	43	33	86	76	39	29	90	78	43	33
1315	77	74	67	35	30	74	65	35	30	72	64	30	26	74	67	27	22	70	65	30	26
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	73	73	72	62	54	72	71	63	51	71	67	41	30	64	62	41	33	66	65	40	30

Table L-36 (continued)
Estimated Changes in Red-breasted Sapsucker Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 Percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	96	96	96	49	38	96	96	49	38	96	96	60	29	96	96	68	32	96	95	43	27
1319	87	89	84	61	47	89	80	50	38	83	72	41	22	88	85	53	40	79	75	48	33
1323	98	95	93	73	68	97	96	73	68	95	92	76	64	92	91	75	55	93	91	70	64
1332	89	89	88	70	65	89	88	65	56	87	81	51	35	86	82	59	45	84	80	45	35
1420	67	68	61	30	22	69	56	30	22	68	54	24	16	66	60	23	14	59	54	24	16
1421	84	89	80	53	45	90	78	42	32	84	77	36	26	85	78	29	17	82	79	40	31
1422	74	66	61	48	47	62	50	37	36	53	48	34	34	60	53	20	16	69	62	28	25
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	61	29	26	21	19	29	29	21	19	26	22	18	14	26	22	13	8	50	25	20	14
1526	96	96	96	95	95	92	91	86	84	90	87	82	80	89	85	79	76	89	87	82	80
1527	83	82	75	58	47	82	75	55	43	80	70	52	29	82	67	42	23	67	66	55	35
1528	92	86	84	80	77	84	82	76	71	75	70	58	51	79	74	58	50	73	71	63	56
1529	78	70	64	53	46	66	62	46	35	67	60	40	29	74	66	41	29	60	55	39	29
1530	75	74	64	42	28	75	66	41	27	74	64	45	25	74	60	32	14	61	59	45	24
1531	70	62	56	41	40	66	57	42	40	58	52	36	34	53	40	11	8	70	61	38	37
1601	100	99	99	74	57	99	99	75	57	99	99	68	41	98	98	72	54	100	97	73	41
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	84	70	100	100	89	75
1603	98	91	91	86	81	93	91	85	77	91	89	82	69	91	89	82	73	91	91	86	76
1604	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1605	88	91	91	84	75	91	88	73	53	90	86	72	50	90	86	72	55	88	88	76	53
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	95	85	78	69	94	91	77	62	100	100	79	41	97	97	82	55	103	102	83	45
1811	100	97	93	89	85	97	96	91	85	98	98	89	73	98	98	92	81	100	100	94	83
1812	99	98	97	94	91	98	97	96	93	98	97	92	85	99	99	95	90	96	95	92	86
1813	90	90	90	90	90	90	90	90	90	89	88	78	73	90	90	84	81	90	90	78	75
1814	99	99	97	92	87	99	96	92	87	100	100	94	86	100	100	93	84	97	97	94	86
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	92	82	70	60	99	97	86	60	97	95	82	56	96	95	78	50	95	93	82	58
1817	100	100	100	91	72	100	100	92	72	100	100	78	34	100	100	100	70	100	100	81	41
1901	97	89	85	69	62	81	79	66	60	85	75	58	46	85	71	56	39	90	86	61	47
1902	98	93	81	68	57	98	98	86	57	98	95	80	50	94	92	68	28	94	92	78	50
1903	95	93	91	77	60	92	86	75	56	91	81	66	45	87	80	67	45	92	83	68	47
1904	84	83	80	77	72	83	79	77	73	78	70	57	44	72	56	44	27	80	72	58	48
1905	87	84	76	62	39	84	64	47	39	80	61	43	39	77	57	42	34	83	63	45	39
1906	78	74	72	70	69	73	72	69	69	71	67	55	53	65	59	14	7	78	78	70	69
1910	100	98	97	94	93	96	96	94	93	96	95	92	90	96	93	90	86	97	96	92	90
2007	89	91	81	69	56	91	75	64	50	89	72	60	42	91	70	58	40	92	75	64	48
2008	100	100	100	100	100	91	85	70	48	88	82	66	41	89	83	66	44	87	87	72	48

Table L-36 (continued)

Estimated Changes in Red-breasted Sapsucker Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	96	96	96	96	96	82	82	82	82	49	49	49	49	94	94	94	94	63	63	59	59
2203	98	98	98	98	98	98	98	98	98	96	96	96	96	98	98	98	98	96	96	96	96
2304	98	92	92	92	92	92	92	92	92	90	90	90	90	86	86	76	72	91	91	90	90
2305	100	82	81	56	54	82	81	67	54	76	76	57	47	83	83	62	60	78	78	52	45
2306	94	85	81	48	43	85	81	62	43	79	79	56	36	81	80	46	43	76	71	49	36
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	100	86	85	100	100	67	50	100	100	85	84	100	100	78	62
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	97	97	100	100	100	100
2516	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2517	100	103	103	96	84	100	100	93	79	101	101	91	79	98	98	77	73	100	100	87	84
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	98	80	100	100	95	77	100	100	92	75	100	100	77	72	100	100	81	78
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	85	66	66	66	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	81	61	61	61	100	100	100	100
2722	100	100	100	99	99	100	100	99	99	100	100	99	97	100	100	97	96	100	100	100	97
2823	100	80	80	80	79	80	79	79	78	59	59	59	59	56	55	55	53	59	59	59	59
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	94	94	70	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	101	101	94	87	95	95	78	66	83	83	66	64	100	100	90	61	80	76	66	64
2927	100	100	97	95	89	100	99	95	88	82	80	53	46	100	100	92	87	84	80	56	48
3001	91	87	87	85	85	84	84	80	80	57	52	50	49	62	62	61	57	68	68	67	64
3002	87	84	84	77	77	81	81	76	76	76	73	72	70	76	76	74	71	83	83	83	80
3003	97	83	83	78	78	79	79	74	74	64	60	60	57	69	69	68	63	74	74	73	69
3104	87	88	88	84	82	87	87	82	79	61	55	51	49	63	63	62	59	67	65	62	56
3105	100	95	95	94	94	96	96	96	96	76	76	76	75	73	73	73	72	95	95	95	94
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	71	71	71	71	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	84	75	70	62	46	72	70	60	46	60	58	53	41	76	70	56	40	67	60	53	41
3309	100	98	95	93	75	93	90	87	75	83	78	75	75	99	95	92	73	78	77	76	75
3310	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
3311	99	99	99	99	99	79	79	76	75	73	69	62	62	64	62	59	56	69	69	63	62
3312	99	74	74	66	66	73	73	66	66	60	56	54	54	51	50	50	45	59	59	59	56
3313	86	58	58	44	43	58	58	44	43	43	43	42	37	56	51	39	32	54	48	42	37
3314	96	82	82	75	75	80	80	75	75	55	50	48	47	49	49	48	43	55	55	55	51
3315	95	67	65	57	56	63	63	57	56	68	66	57	54	65	63	48	44	68	62	58	55
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-36 (continued)
Estimated Changes in Red-breasted Sapsucker Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability
(1954 = 100 Percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	100	100	100	100	100	100	100	100	100	98	98	98	98	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	89	89	89	88	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	96	96	96	96	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	98	98	97	97	100	100	100	100	95	95	95	95	100	100	100	100	100	100	100	100
3523	96	96	96	95	95	96	94	90	85	89	83	79	70	88	86	71	56	77	67	61	46
3524	100	96	94	74	66	93	91	73	65	89	86	62	45	96	94	74	65	71	71	60	45
3525	91	88	88	75	60	91	86	72	55	87	75	63	41	86	86	65	43	68	62	56	39
3526	92	88	88	80	77	88	85	75	69	71	70	64	57	83	80	64	52	73	61	51	40
3551	93	94	92	68	57	91	89	65	54	91	87	55	33	95	90	53	36	68	68	53	33
3627	93	83	79	71	57	80	78	69	56	70	68	63	53	82	78	67	54	76	69	63	53
3628	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
3629	97	97	95	94	82	92	89	87	75	86	83	81	80	94	90	85	61	62	62	53	51
3630	100	99	99	99	98	96	94	91	87	84	76	75	70	85	81	68	57	92	80	77	68
3731	97	83	82	79	78	81	81	78	78	78	76	70	68	75	74	62	59	88	86	84	83
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	83	83	83	83	100	100	100	100
3835	100	100	98	95	67	96	94	91	65	97	96	65	45	96	90	83	70	69	69	58	38
3836	100	100	100	100	97	100	99	99	95	104	103	75	57	102	93	84	65	82	82	73	56
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	99	99	99	99	99	100	95	88	81	97	89	81	75	97	92	88	80	88	86	81	78
4252	100	100	100	100	100	100	90	76	63	94	78	68	55	95	80	72	55	78	76	67	60
4253	91	91	91	91	91	92	80	66	52	84	71	63	53	85	71	60	43	73	70	62	55
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	85	85	85	85	85	80	80	80	80	43	43	43	43	85	85	85	85	49	49	43	43

Table L-36 (continued)

Estimated Changes in Red-breasted Sapsucker Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	0	0	100	100	100	100
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	98	98	98	98	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	99	100	99	99	99	100	99	99	99	100	100	99	99	99	99	99	99	100	100	99	99
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	94	99	95	93	92	94	89	84	81	94	93	87	61	88	87	78	71	94	94	90	66
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	88	86	75	65	48	82	73	60	50	75	65	53	39	74	68	54	43	74	67	60	50
5013	99	97	94	88	83	99	97	87	81	96	96	81	73	91	88	54	30	96	93	82	73
5014	98	93	84	66	50	99	95	67	51	94	94	64	46	96	93	57	36	94	88	63	46
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	100	99	99	99	98	100	100	100	100	100	100	100	100	99	99	98	98	100	100	100	100
5017	100	100	100	100	100	100	100	93	77	100	100	93	73	99	98	89	67	100	100	100	100
5018	98	96	92	83	76	100	98	83	73	96	96	83	76	97	96	73	49	96	94	83	76
5130	99	95	95	83	76	95	95	84	74	91	91	80	68	91	91	76	58	91	91	80	68
5131	95	96	96	77	68	95	95	79	67	91	90	76	62	92	92	71	48	92	91	76	62
5132	85	92	92	62	48	91	91	63	43	86	86	64	41	90	90	64	41	89	86	64	41
5133	99	99	99	99	99	96	96	84	63	95	95	79	56	95	95	81	58	94	94	80	59
5134	95	91	91	81	72	92	92	83	66	91	91	83	63	92	92	81	60	91	91	82	64
5135	100	93	93	72	57	91	91	71	53	86	85	69	49	88	88	73	57	88	85	69	49
5136	94	97	97	68	47	95	95	70	47	89	88	68	41	90	90	67	44	92	88	68	41
5137	100	100	100	99	99	100	100	98	98	100	100	97	97	100	100	99	99	100	100	97	97
5138	95	95	95	67	58	102	99	78	44	100	98	75	41	100	98	75	41	98	98	75	41

Table L-37

Estimated Changes in Brown Creeper Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	364	258	256	256	256	256	257	257	257	257	255	255	255	255	257	257	257	257	257	257	257	257
303	134	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
404	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709	709
405	477	246	203	189	142	136	203	187	138	131	194	188	137	130	196	187	136	130	196	187	136	130
406	1494	723	715	668	559	534	662	614	460	436	634	594	396	338	643	592	411	373	643	592	411	373
407	318	291	291	291	277	273	291	291	167	147	291	291	142	105	291	291	142	105	291	291	142	105
408	255	228	228	228	211	209	228	228	211	209	228	228	212	209	228	228	212	209	228	228	212	209
509	998	812	812	812	655	635	812	805	661	642	803	793	607	574	795	783	588	554	795	783	588	554
510	2858	834	768	628	517	474	821	744	475	420	822	706	376	307	860	744	407	340	860	744	407	340
511	233	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
612	418	346	346	346	285	236	346	346	252	203	285	285	171	138	283	283	173	140	283	283	173	140
613	220	118	107	107	101	98	111	111	101	98	139	139	72	53	137	137	73	54	137	137	73	54
614	32	32	32	32	23	19	32	32	23	19	32	32	29	12	32	32	31	12	32	32	31	12
715	370	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349
716	1154	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106	1106
717	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392	392
718	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
719	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460	460
820	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419	419
821	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667	667
822	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815	815
823	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282	282
824	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259	259
825	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319
826	228	228	228	228	228	228	228	228	228	228	238	181	124	96	239	223	201	176	239	223	201	176
901	403	325	319	306	151	151	329	306	129	129	324	92	92	92	318	122	122	122	318	122	122	122
902	633	633	633	633	633	631	633	633	633	631	633	633	633	614	633	633	633	633	633	633	633	633
1003	3033	997	524	467	467	300	564	563	507	297	519	440	440	202	979	391	391	202	979	391	391	202
1105	1285	1231	1230	1216	992	678	1223	1214	1192	1067	1213	681	681	307	1197	770	770	434	1197	770	770	434
1106	143	143	127	126	125	124	106	94	92	72	107	85	84	66	137	136	136	134	137	136	136	134
1107	2848	2503	2489	2475	2453	2388	2500	2353	2331	2084	2455	1947	1924	1504	2403	2130	2130	1772	2403	2130	2130	1772
1108	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701	701
1209	988	988	988	856	856	744	988	862	862	773	988	661	661	385	988	859	859	770	988	859	859	770
1210	1342	1342	1342	1118	1118	998	1342	1092	1092	899	1342	921	921	646	1342	921	921	646	1342	921	921	646
1211	1686	1650	1551	1450	1450	660	1603	1445	1445	639	1552	1382	1382	539	1718	1434	1434	539	1718	1434	1434	539
1212	197	188	183	173	173	171	183	173	173	171	185	85	85	78	174	103	103	101	174	103	103	101
1213	1220	1199	1148	1108	1108	1006	1151	1114	1114	1030	1033	672	666	533	1014	675	675	533	1014	675	675	533
1214	2092	1503	1503	1319	1319	775	1503	1310	1310	760	1503	915	895	493	1503	926	926	493	1503	926	926	493
1315	2974	866	866	449	432	321	866	445	414	317	866	330	330	251	863	329	329	254	863	329	329	254
1316	1125	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113	1113
1317	2018	403	403	400	400	327	403	383	383	304	377	277	277	135	332	266	266	138	332	266	266	138
1318	1054	853	768	484	443	274	774	698	484	319	701	412	412	216	689	383	383	170	689	383	383	170

Table L-37 (continued)

Estimated Changes in Brown Creeper Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1319	3322	1681	1681	1449	1218	956	1681	1356	1043	714	1588	754	744	349	1583	1013	1013	662	1583	1013	1013	662
1323	367	300	300	267	255	207	300	314	253	207	323	241	241	185	300	244	244	185	300	244	244	185
1332	1038	322	322	322	322	244	322	322	322	215	322	322	322	148	322	322	322	148	322	322	322	148
1420	2369	640	496	262	235	171	496	258	232	168	467	158	158	76	384	156	156	82	384	156	156	82
1421	3381	1456	1456	995	927	772	1456	838	838	604	1456	745	710	421	1334	853	853	631	1334	853	853	631
1422	5853	1735	1735	1033	1033	903	1735	708	708	633	1351	599	599	517	1735	619	619	525	1735	619	619	525
1524	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
1525	3830	1588	734	556	556	423	737	737	556	423	663	475	475	286	1342	603	603	286	1342	603	603	286
1526	1375	1068	1032	1016	1016	1013	990	932	895	842	961	833	833	768	952	833	833	765	952	833	833	765
1527	1591	730	602	436	436	290	602	476	438	263	579	365	365	141	459	385	385	191	459	385	385	191
1528	617	403	403	381	381	345	403	379	363	313	379	268	268	180	361	292	292	212	361	292	292	212
1529	3895	1994	1868	1382	1382	1018	1756	1353	1215	781	1776	1169	1169	691	1596	1165	1165	684	1596	1165	1165	684
1530	2384	379	379	379	379	101	379	379	379	92	379	379	379	82	379	379	379	80	379	379	379	80
1531	2700	1127	802	483	483	445	814	541	496	445	678	381	381	320	810	416	416	356	810	416	416	356
1601	439	439	352	352	298	288	356	356	331	288	335	335	310	209	395	335	310	209	395	335	310	209
1602	375	354	354	354	354	354	354	354	354	354	354	354	354	354	360	360	289	274	360	360	289	274
1603	225	141	105	105	102	97	84	84	84	78	87	79	79	77	84	80	80	78	84	80	80	78
1604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1605	845	173	80	80	73	61	74	74	74	53	77	58	58	52	74	59	59	53	74	59	59	53
1706	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
1707	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269
1708	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704	704
1809	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
1810	303	303	196	196	188	188	176	176	167	167	142	142	117	117	212	158	130	130	212	158	130	130
1811	300	279	218	218	213	213	217	217	213	213	189	189	176	176	226	206	196	196	226	206	196	196
1812	238	192	183	183	183	182	183	183	182	182	177	174	172	172	181	174	172	172	181	174	172	172
1813	865	77	77	77	77	77	77	77	77	77	71	71	46	46	71	71	46	46	71	71	46	46
1814	151	91	83	83	83	83	83	83	83	83	82	82	82	82	90	82	82	82	90	82	82	82
1815	48	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
1816	28	28	25	25	25	19	25	25	25	19	21	21	21	15	24	24	24	18	24	24	24	18
1817	454	454	438	438	368	348	438	438	368	348	414	414	273	187	433	433	303	219	433	433	303	219
1901	1047	629	452	452	410	402	427	388	334	326	352	302	215	215	353	302	215	215	353	302	215	215
1902	55	7	5	5	5	3	5	5	5	3	4	4	4	2	4	4	4	2	4	4	4	2
1903	1138	478	338	338	312	283	322	322	268	268	355	282	202	202	367	292	211	211	367	292	211	211
1904	650	166	166	166	162	146	166	166	146	146	150	150	59	59	149	149	58	58	149	149	58	58
1905	2529	611	261	261	261	227	261	261	242	227	383	234	216	216	454	234	216	216	454	234	216	216
1906	453	24	24	24	24	15	24	24	15	15	22	22	10	10	24	24	21	21	24	24	21	21
1910	376	334	334	334	331	331	334	334	331	331	334	334	330	330	334	334	330	330	334	334	330	330
2007	2453	766	484	484	484	459	392	392	371	371	541	287	264	264	647	358	336	336	647	358	336	336
2008	40	40	40	40	40	40	21	21	21	21	16	10	9	9	22	22	21	21	22	22	21	21
2202	260	158	158	158	158	158	156	156	156	153	80	80	80	80	143	143	82	82	143	143	82	82
2203	297	204	204	204	204	204	204	204	204	204	197	197	197	197	209	209	197	197	209	209	197	197

Table L-37 (continued)

Estimated Changes in Brown Creeper Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2304	233	146	143	143	143	141	143	143	143	141	134	134	134	134	151	151	134	134	151	151	134	134
2305	457	430	430	403	375	217	430	403	375	217	430	430	403	201	430	430	206	194	430	430	206	194
2306	472	256	256	244	244	93	256	244	244	93	256	256	256	92	256	251	99	93	256	251	99	93
2408	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2409	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
2410	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
2411	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
2412	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2413	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
2514	270	270	270	269	269	269	270	234	234	234	251	251	251	182	268	268	256	215	268	268	256	215
2515	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326	326
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	19	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	14	14	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
2620	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
2621	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
2722	208	205	205	205	205	205	205	205	205	205	204	204	204	201	204	204	204	201	204	204	204	201
2823	780	780	637	586	542	465	752	680	636	454	340	340	324	324	324	324	324	324	324	324	324	324
2824	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173	173
2825	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187
2926	527	527	524	455	455	455	496	402	402	402	454	454	454	398	485	471	453	398	485	471	453	398
2927	1776	1776	1776	1536	1528	1527	1776	1536	1533	1527	1313	1063	1046	722	1745	1666	1381	756	1745	1666	1381	756
3001	828	84	78	78	78	78	79	79	76	76	53	51	38	38	60	60	59	59	60	60	59	59
3002	566	38	37	37	37	37	38	38	37	37	40	39	36	36	37	37	37	37	37	37	37	37
3003	319	162	162	162	162	142	162	162	151	138	162	162	129	120	148	148	148	133	148	148	148	133
3104	935	93	90	90	90	85	88	88	84	84	80	77	68	68	83	82	70	70	83	82	70	70
3105	52	40	32	32	32	32	33	33	33	33	27	27	27	27	32	32	32	32	32	32	32	32
3206	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
3207	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
3308	2574	491	491	475	475	340	487	474	419	340	449	436	380	309	485	447	391	309	485	447	391	309
3309	47	47	47	47	47	37	47	47	47	37	47	47	42	37	47	47	40	37	47	47	40	37
3310	426	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243
3311	174	105	105	105	105	105	92	92	80	80	84	79	76	76	78	78	76	76	78	78	76	76
3312	32	5	4	4	4	4	6	6	4	4	6	6	3	3	3	3	3	3	3	3	3	3
3313	1281	126	100	100	100	92	100	100	92	92	85	85	85	85	92	85	85	85	92	85	85	85
3314	157	25	21	21	21	21	23	23	21	21	24	23	16	16	17	17	17	17	17	17	17	17
3315	476	227	195	191	191	148	189	189	148	148	176	173	146	146	198	191	147	147	198	191	147	147
3416	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195	195
3417	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
3418	40	40	40	40	40	40	40	40	40	40	36	36	36	36	40	40	40	40	40	40	40	40
3419	331	331	331	331	331	331	331	331	331	331	330	330	330	330	331	331	331	331	331	331	331	331

Table L-37 (continued)

Estimated Changes in Brown Creeper Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3420	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218
3421	117	117	116	116	116	116	117	117	117	117	116	116	116	116	117	117	117	117	117	117	117	117
3523	613	427	423	423	423	421	414	408	393	371	410	389	354	320	420	385	346	295	420	385	346	295
3524	23	23	23	23	23	13	23	23	23	13	23	23	17	9	23	23	18	9	23	23	18	9
3525	1224	423	383	383	383	306	399	379	379	269	422	364	300	219	387	356	302	223	387	356	302	223
3526	640	235	221	221	221	186	221	214	201	159	195	191	144	137	252	217	157	131	252	217	157	131
3551	890	353	349	341	320	239	339	331	309	229	318	304	239	185	310	310	245	185	310	310	245	185
3627	579	324	268	262	262	228	265	261	247	228	247	244	231	214	256	247	233	214	256	247	233	214
3628	440	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
3629	673	353	353	353	353	332	353	353	353	330	353	353	333	324	347	347	305	297	347	347	305	297
3630	186	186	186	186	186	179	182	178	166	152	180	161	120	84	161	131	108	80	161	131	108	80
3731	221	68	68	68	68	53	68	68	53	53	67	66	47	47	68	68	54	54	68	68	54	54
3732	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
3733	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285
3734	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
3835	163	163	163	120	120	120	163	114	114	114	163	172	140	74	163	163	163	74	163	163	163	74
3836	822	822	797	785	785	785	793	775	775	775	759	695	641	528	729	729	663	521	729	729	663	521
3837	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162	1162
3938	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638	1638
3939	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204	1204
3940	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185	1185
4041	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895	895
4042	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592	1592
4043	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066	1066
4044	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735	735
4054	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982	982
4055	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353	1353
4145	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459	459
4146	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310	310
4147	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132
4148	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706	706
4149	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381
4150	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
4222	1060	976	976	976	976	976	879	818	813	669	843	747	592	515	800	784	653	589	800	784	653	589
4252	292	292	292	292	292	292	304	265	262	186	295	245	167	125	281	277	215	180	281	277	215	180
4253	548	251	251	251	251	251	353	287	273	138	395	323	206	140	320	308	210	152	320	308	210	152
4256	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231	231
4302	148	79	79	79	79	79	78	78	78	78	26	26	26	26	47	47	26	26	47	47	26	26
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
4408	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143	143
4503	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471	1471

Table L-37 (continued)

Estimated Changes in Brown Creeper Habitat Capability (Number of Animals) Due to Vegetative Changes

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4504	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
4505	128	116	116	110	110	110	116	113	113	110	115	114	114	107	115	115	115	107	115	115	115	107
4506	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
4508	3073	2551	2551	2451	2451	2403	2427	1998	1975	1658	2735	2551	2493	1019	2551	2551	2551	1341	2551	2551	2551	1341
4607	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5012	5921	3330	3330	2870	2276	1380	3138	2752	2201	1486	2873	2487	1863	1106	2862	2575	2276	1454	2862	2575	2276	1454
5013	484	412	412	402	356	352	412	412	352	348	412	412	323	316	412	403	329	322	412	403	329	322
5014	694	580	497	461	364	355	503	488	357	348	469	469	335	325	464	445	335	325	464	445	335	325
5015	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166
5016	691	646	646	646	641	641	646	646	646	646	646	646	646	646	646	646	646	646	646	646	646	646
5017	821	821	821	821	821	821	811	811	729	647	809	809	705	619	821	821	821	821	821	821	821	821
5018	377	236	236	225	182	177	236	236	185	175	232	232	181	177	231	223	181	177	231	223	181	177
5130	526	466	404	404	387	376	397	397	380	371	426	412	375	364	412	412	375	364	412	412	375	364
5131	662	252	229	229	228	220	218	218	218	211	225	210	188	182	210	210	188	182	210	210	188	182
5132	658	77	71	71	71	64	69	69	69	62	104	88	70	61	88	88	70	61	88	88	70	61
5133	674	617	614	614	614	614	549	549	379	347	533	533	337	294	529	529	338	299	529	529	338	299
5134	.730	224	220	220	161	145	222	222	153	136	215	215	140	118	215	215	143	121	215	215	143	121
5135	40	40	39	39	39	21	40	40	40	21	40	28	19	8	40	40	19	8	40	40	19	8
5136	897	426	254	254	254	207	253	253	253	207	352	279	232	166	278	278	232	166	278	278	232	166
5137	240	240	241	241	236	236	236	236	230	230	238	238	227	227	238	238	227	227	238	238	227	227
5138	680	272	238	238	159	150	220	220	97	74	235	225	99	71	229	229	97	71	229	229	97	71

Table L-38

Estimated Changes in Brown Creeper Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown creepers are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	71	70	70	70	70	71	71	71	71	70	70	70	70	71	71	71	71	71	71	71	71
303	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	52	43	40	30	29	43	39	29	27	41	39	29	27	41	39	29	27	41	39	29	27
406	48	48	45	37	36	44	41	31	29	42	40	27	23	43	40	28	25	43	40	28	25
407	92	92	92	87	86	92	92	53	46	92	92	45	33	92	92	45	33	92	92	45	33
408	89	89	89	83	82	89	89	83	82	89	89	83	82	89	89	83	82	89	89	83	82
509	81	81	81	66	64	81	81	66	64	80	79	61	58	80	78	59	56	80	78	59	56
510	29	27	22	18	17	29	26	17	15	29	25	13	11	30	26	14	12	30	26	14	12
511	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
612	83	83	83	68	56	83	83	60	49	68	68	41	33	68	68	41	33	68	68	41	33
613	54	49	49	46	45	50	50	46	45	63	63	33	24	62	62	33	25	62	62	33	25
614	100	100	100	72	59	100	100	72	59	100	100	91	38	100	100	97	38	100	100	97	38
715	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94
716	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	104	79	54	42	105	98	88	77	105	98	88	77
901	81	79	76	37	37	82	76	32	32	80	23	23	23	79	30	30	30	79	30	30	30
902	100	100	100	100	100	100	100	100	100	100	100	100	97	100	100	100	100	100	100	100	100
1003	33	17	15	15	10	19	19	17	10	17	15	15	7	32	13	13	7	32	13	13	7
1105	96	96	95	77	53	95	94	93	83	94	53	53	24	93	60	60	34	93	60	60	34
1106	100	89	88	87	87	74	66	64	50	75	59	59	46	96	95	95	94	96	95	95	94
1107	88	87	87	86	84	88	83	82	73	86	68	68	53	84	75	75	62	84	75	75	62
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	87	87	75	100	87	87	78	100	67	67	39	100	87	87	78	100	87	87	78
1210	100	100	83	83	74	100	81	81	67	100	69	69	48	100	69	69	48	100	69	69	48
1211	98	92	86	86	39	95	86	86	38	92	82	82	32	102	85	85	32	102	85	85	32
1212	95	93	88	88	87	93	88	88	87	94	43	43	40	88	52	52	51	88	52	52	51
1213	98	94	91	91	82	94	91	91	84	85	55	55	44	83	55	55	44	83	55	55	44
1214	72	72	63	63	37	72	63	63	36	72	44	43	24	72	44	44	24	72	44	44	24
1315	29	29	15	15	11	29	15	14	11	29	11	11	8	29	11	11	9	29	11	11	9
1316	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
1317	20	20	20	20	16	20	19	19	15	19	14	14	7	16	13	13	7	16	13	13	7

Table L-38 (continued)
Estimated Changes in Brown Creeper Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown creepers are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1318	81	73	46	42	26	73	66	46	30	67	39	39	20	65	36	36	16	65	36	36	16
1319	51	51	44	37	29	51	41	31	21	48	23	22	11	48	30	30	20	48	30	30	20
1323	82	82	73	69	56	82	86	69	56	88	66	66	50	82	66	66	50	82	66	66	50
1332	31	31	31	31	24	31	31	31	21	31	31	31	14	31	31	31	14	31	31	31	14
1420	27	21	11	10	7	21	11	10	7	20	7	7	3	16	7	7	3	16	7	7	3
1421	43	43	29	27	23	43	25	25	18	43	22	21	12	39	25	25	19	39	25	25	19
1422	30	30	18	18	15	30	12	12	11	23	10	10	9	30	11	11	9	30	11	11	9
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	41	19	15	15	11	19	19	15	11	17	12	12	7	35	16	16	7	35	16	16	7
1526	78	75	74	74	74	72	68	65	61	70	61	61	56	69	61	61	56	69	61	61	56
1527	46	38	27	27	18	38	30	28	17	36	23	23	9	29	24	24	12	29	24	24	12
1528	65	65	62	62	56	65	61	59	51	61	43	43	29	59	47	47	34	59	47	47	34
1529	51	48	35	35	26	45	35	31	20	46	30	30	18	41	30	30	18	41	30	30	18
1530	16	16	16	16	4	16	16	16	4	16	16	16	3	16	16	16	3	16	16	16	3
1531	42	30	18	18	16	30	20	18	16	25	14	14	12	30	15	15	13	30	15	15	13
1601	100	80	80	68	66	81	81	75	66	76	76	71	48	90	76	71	48	90	76	71	48
1602	94	94	94	94	94	94	94	94	94	94	94	94	94	96	96	77	73	96	96	77	73
1603	63	47	47	45	43	37	37	37	35	39	35	35	34	37	36	36	35	37	36	36	35
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	20	9	9	9	7	9	9	9	6	9	7	7	6	9	7	7	6	9	7	7	6
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	65	65	62	62	58	58	55	55	47	47	39	39	70	52	43	43	70	52	43	43
1811	93	73	73	71	71	72	72	71	71	63	63	59	59	75	69	65	65	75	69	65	65
1812	81	77	77	77	76	77	77	76	76	74	73	72	72	76	73	72	72	76	73	72	72
1813	9	9	9	9	9	9	9	9	9	8	8	5	5	8	8	5	5	8	8	5	5
1814	60	55	55	55	55	55	55	55	55	54	54	54	54	60	54	54	54	60	54	54	54
1815	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
1816	100	89	89	89	68	89	89	89	68	75	75	75	54	86	86	86	64	86	86	86	64
1817	100	96	96	81	77	96	96	81	77	91	91	60	41	95	95	67	48	95	95	67	48
1901	60	43	43	39	38	41	37	32	31	34	29	21	21	34	29	21	21	34	29	21	21
1902	13	9	9	9	5	9	9	9	5	7	7	7	4	7	7	7	4	7	7	7	4
1903	42	30	30	27	25	28	28	24	24	31	25	18	18	32	26	19	19	32	26	19	19
1904	26	26	26	25	22	26	26	22	22	23	23	9	9	23	23	9	9	23	23	9	9
1905	24	10	10	10	9	10	10	10	9	15	9	9	9	18	9	9	9	18	9	9	9
1906	5	5	5	5	3	5	5	3	3	5	5	2	2	5	5	5	5	5	5	5	5
1910	89	89	89	88	88	89	89	88	88	89	89	88	88	89	89	88	88	89	89	88	88
2007	31	20	20	20	19	16	16	15	15	22	12	11	11	26	15	14	14	26	15	14	14
2008	100	100	100	100	100	53	53	53	53	40	25	23	23	55	55	53	53	55	55	53	53

Table L-38 (continued)

Estimated Changes in Brown Creeper Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown creepers are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
2202	61	61	61	61	61	60	60	60	59	31	31	31	31	55	55	32	32	55	55	32	32
2203	69	69	69	69	69	69	69	69	69	66	66	66	66	70	70	66	66	70	70	66	66
2304	63	61	61	61	61	61	61	61	61	58	58	58	58	65	65	58	58	65	65	58	58
2305	94	94	88	82	47	94	88	82	47	94	94	88	44	94	94	45	42	94	94	45	42
2306	54	54	52	52	20	54	52	52	20	54	54	54	19	54	53	21	20	54	53	21	20
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	100	100	100	100	100	87	87	87	93	93	93	67	99	99	95	80	99	99	95	80
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2722	99	99	99	99	99	99	99	99	99	98	98	98	97	98	98	98	97	98	98	98	97
2823	100	82	75	69	60	96	87	82	58	44	44	42	42	42	42	42	42	42	42	42	42
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	99	86	86	86	94	76	76	76	86	86	86	76	92	89	86	76	92	89	86	76
2927	100	100	86	86	86	100	86	86	86	74	60	59	41	98	94	78	43	98	94	78	43
3001	10	9	9	9	9	10	10	9	9	6	6	5	5	7	7	7	7	7	7	7	7
3002	7	7	7	7	7	7	7	7	7	7	7	6	6	7	7	7	7	7	7	7	7
3003	51	51	51	51	45	51	51	47	43	51	51	40	38	46	46	46	42	46	46	46	42
3104	10	10	10	10	9	9	9	9	9	9	8	7	7	9	9	7	7	9	9	7	7
3105	77	62	62	62	62	63	63	63	63	52	52	52	52	62	62	62	62	62	62	62	62
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	19	19	18	18	13	19	18	16	13	17	17	15	12	19	17	15	12	19	17	15	12
3309	100	100	100	100	79	100	100	100	79	100	100	89	79	100	100	85	79	100	100	85	79
3310	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
3311	60	60	60	60	60	53	53	46	46	48	45	44	44	45	45	44	44	45	45	44	44
3312	16	13	13	13	13	19	19	13	13	19	19	9	9	9	9	9	9	9	9	9	9
3313	10	8	8	8	7	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7
3314	16	13	13	13	13	15	15	13	13	15	15	10	10	11	11	11	11	11	11	11	11
3315	48	41	40	40	31	40	40	31	31	37	36	31	31	42	40	31	31	42	40	31	31
3416	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-38 (continued)

Estimated Changes in Brown Creeper Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability

(1954 = 100 Percent) (a "-" means brown creepers are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3417	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	90	90	90	90	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	99	99	99	99	100	100	100	100	99	99	99	99	100	100	100	100	100	100	100	100
3523	70	69	69	69	69	68	67	64	61	67	63	58	52	69	63	56	48	69	63	56	48
3524	100	100	100	100	57	100	100	100	57	100	100	74	39	100	100	78	39	100	100	78	39
3525	35	31	31	31	25	33	31	31	22	34	30	25	18	32	29	25	18	32	29	25	18
3526	37	35	35	35	29	35	33	31	25	30	30	23	21	39	34	25	20	39	34	25	20
3551	40	39	38	36	27	38	37	35	26	36	34	27	21	35	35	28	21	35	35	28	21
3627	56	46	45	45	39	46	45	43	39	43	42	40	37	44	43	40	37	44	43	40	37
3628	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
3629	52	52	52	52	49	52	52	52	49	52	52	49	48	52	52	45	44	52	52	45	44
3630	100	100	100	100	96	98	96	89	82	97	87	65	45	87	70	58	43	87	70	58	43
3731	31	31	31	31	24	31	31	24	24	30	30	21	21	31	31	24	24	31	31	24	24
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3835	100	100	74	74	74	100	70	70	70	100	106	86	45	100	100	100	45	100	100	100	45
3836	100	97	95	95	95	96	94	94	94	92	85	78	64	89	89	81	63	89	89	81	63
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3938	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3939	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3940	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4041	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4042	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4043	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4044	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4054	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4055	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4145	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4146	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4147	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4148	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4149	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4222	92	92	92	92	92	83	77	77	63	80	70	56	49	75	74	62	56	75	74	62	56
4252	100	100	100	100	100	104	91	90	64	101	84	57	43	96	95	74	62	96	95	74	62
4253	46	46	46	46	46	64	52	50	25	72	59	38	26	58	56	38	28	58	56	38	28
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	53	53	53	53	53	53	53	53	53	18	18	18	18	32	32	18	18	32	32	18	18

Table L-38 (continued)

Estimated Changes in Brown Creeper Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means brown creepers are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4505	91	91	86	86	86	91	88	88	86	90	89	89	84	90	90	90	84	90	90	90	84
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	83	83	80	80	78	79	65	64	54	89	83	81	33	83	83	83	44	83	83	83	44
4607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5012	56	56	48	38	23	53	46	37	25	49	42	31	19	48	43	38	25	48	43	38	25
5013	85	85	83	74	73	85	85	73	72	85	85	67	65	85	83	68	67	85	83	68	67
5014	84	72	66	52	51	72	70	51	50	68	68	48	47	67	64	48	47	67	64	48	47
5015	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5016	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
5017	100	100	100	100	100	99	99	89	79	99	99	86	75	100	100	100	100	100	100	100	100
5018	63	63	60	48	47	63	63	49	46	62	62	48	47	61	59	48	47	61	59	48	47
5130	89	77	77	74	71	75	75	72	71	81	78	71	69	78	78	71	69	78	78	71	69
5131	38	35	35	34	33	33	33	33	32	34	32	28	27	32	32	28	27	32	32	28	27
5132	12	11	11	11	10	10	10	10	9	16	13	11	9	13	13	11	9	13	13	11	9
5133	92	91	91	91	91	81	81	56	51	79	79	50	44	78	78	50	44	78	78	50	44
5134	31	30	30	22	20	30	30	21	19	29	29	19	16	29	29	20	17	29	29	20	17
5135	100	98	98	98	53	100	100	100	53	100	70	48	20	100	100	48	20	100	100	48	20
5136	47	28	28	28	23	28	28	28	23	39	31	26	19	31	31	26	19	31	31	26	19
5137	100	100	100	98	98	98	98	96	96	99	99	95	95	99	99	95	95	99	99	95	95
5138	40	35	35	23	22	32	32	14	11	35	33	15	10	34	34	14	10	34	34	14	10

Table L-39

Estimated Changes in Vancouver Canada Goose Habitat Capability (Number of Animals) Due to Vegetative Changes (a "-" means that geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	112	110	110	110	110	108	110	110	110	109	110	110	110	107	110	110	110	109	110	110	110	109
303	99	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97
404	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
405	111	107	107	104	101	81	107	103	101	80	104	102	101	78	103	98	97	71	104	102	101	78
406	306	292	292	291	286	236	292	285	275	221	288	282	278	207	286	274	270	196	291	280	276	209
407	116	115	115	115	114	110	115	115	114	88	115	115	115	80	115	115	113	84	115	115	115	80
408	39	38	38	38	38	35	38	38	38	35	38	38	38	35	38	38	38	33	38	38	38	35
509	178	175	168	166	162	141	171	170	166	143	170	169	166	134	167	164	162	137	170	167	165	131
510	363	326	323	306	294	257	318	317	299	247	320	303	296	220	309	291	284	213	326	306	299	231
511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
612	241	240	241	241	234	196	241	241	228	194	241	241	227	179	241	241	241	182	241	241	233	180
613	143	141	141	141	141	139	141	141	141	139	141	141	133	105	141	141	141	133	141	141	136	105
614	38	38	38	38	36	31	38	38	36	31	38	38	32	22	38	38	38	31	38	38	33	23
715	207	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206
716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
717	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
719	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
821	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
822	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
823	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
825	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
826	68	68	68	68	68	68	68	68	68	68	66	65	55	52	68	68	63	61	67	67	59	57
901	133	131	129	129	101	98	130	130	101	96	130	127	89	81	130	124	94	77	130	127	97	92
902	320	320	320	320	318	317	320	320	318	317	318	318	314	311	318	318	313	308	320	320	320	320
1003	113	86	61	60	50	48	63	63	49	47	60	54	44	39	60	43	31	26	84	63	43	39
1105	173	173	173	173	164	142	173	173	170	167	173	173	148	114	173	173	154	99	173	173	142	113
1106	16	16	16	16	15	15	16	16	13	12	16	15	13	12	16	16	11	10	16	16	16	16
1107	364	356	356	356	339	333	356	356	329	313	356	338	277	260	354	332	274	261	356	349	312	297
1108	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
1209	222	222	222	220	207	205	221	219	208	206	222	216	186	176	217	209	172	160	221	219	207	205
1210	214	214	212	208	187	185	212	208	182	174	214	206	172	161	210	201	145	129	214	206	172	161
1211	96	95	95	95	84	62	95	95	82	60	95	95	81	58	95	92	76	49	95	95	82	58
1212	95	95	95	93	89	89	95	93	89	89	95	94	82	79	94	94	93	93	95	92	84	84

Table L-39 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability (Number of Animals) Due to Vegetative Changes (a "-" means that geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1213	85	85	83	81	76	73	84	82	78	75	83	77	63	58	82	79	72	69	82	76	62	58
1214	182	171	170	166	150	132	169	166	149	132	171	158	121	108	168	154	118	104	171	156	121	108
1315	204	164	164	164	129	120	164	164	128	119	164	160	119	110	164	163	114	104	164	162	120	111
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	165	132	132	132	132	132	132	132	132	132	132	132	130	115	132	132	130	118	132	132	129	115
1318	169	165	165	160	128	120	165	165	127	119	165	158	133	113	161	158	138	115	162	157	123	112
1319	301	268	268	267	228	202	268	259	209	184	263	242	191	156	268	267	213	189	258	248	205	176
1323	97	96	94	92	83	81	95	94	83	81	93	91	84	78	92	91	83	74	92	90	81	78
1332	212	198	198	198	190	184	198	198	186	175	198	198	173	156	198	194	175	161	198	197	168	156
1420	119	85	85	85	70	59	85	85	70	59	85	85	66	54	85	85	63	51	85	85	67	55
1421	268	231	231	229	186	171	231	224	166	147	231	218	153	133	231	215	136	114	231	225	164	146
1422	343	270	270	270	256	236	270	246	217	190	253	241	211	183	268	249	175	143	270	270	200	167
1524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	116	82	53	50	45	43	53	53	45	43	48	44	39	36	48	44	35	30	71	46	41	36
1526	196	191	191	191	191	191	189	187	181	179	188	185	179	175	185	180	173	169	187	183	177	174
1527	115	101	101	101	89	78	101	101	87	75	101	95	82	61	101	92	74	56	95	94	86	68
1528	75	71	70	69	68	66	69	68	66	63	65	63	58	54	66	64	58	53	65	64	60	56
1529	184	150	150	146	133	117	145	139	122	100	146	137	113	90	150	140	110	88	135	129	110	89
1530	188	155	155	155	131	109	155	158	130	108	155	155	135	105	155	147	117	89	152	150	135	105
1531	90	70	70	68	57	51	70	69	58	51	69	63	51	44	62	51	29	20	70	70	54	47
1601	188	188	178	178	146	124	178	178	147	124	180	180	140	106	177	177	144	121	182	178	146	106
1602	185	185	185	185	185	185	185	185	185	185	185	185	185	185	181	181	160	142	184	184	166	148
1603	128	126	121	121	117	112	122	121	116	108	121	119	113	101	121	119	113	104	121	121	117	107
1604	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
1605	179	165	165	165	165	156	165	165	157	129	165	165	157	126	165	165	157	132	165	165	161	129
1706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1707	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1708	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1809	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
1810	131	131	127	117	110	101	126	123	110	94	131	131	112	73	130	130	116	88	131	131	117	77
1811	136	136	131	125	121	116	131	130	123	116	134	134	123	103	133	133	126	112	134	134	128	113
1812	172	171	171	171	167	163	171	171	168	165	171	171	164	155	171	171	166	160	169	169	165	156
1813	228	211	211	211	211	211	211	211	211	211	211	211	207	200	211	211	211	211	211	211	208	203
1814	158	157	154	153	146	142	155	152	147	142	156	155	148	140	155	155	147	138	152	151	148	140
1815	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138	138
1816	146	146	137	130	121	113	142	140	132	113	140	138	129	110	138	136	125	105	138	137	128	112

Table L-39 (continued)
Estimated Changes in Vancouver Canada Goose Habitat Capability (Number of Animals) Due to Vegetative Changes (a "-" means that geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1817	197	197	197	197	189	167	197	197	190	167	197	197	175	125	197	197	197	164	197	197	178	132
1901	442	432	412	400	353	331	393	387	348	328	403	375	323	288	401	360	316	264	414	403	332	288
1902	37	36	36	33	29	26	36	36	34	26	36	36	32	24	36	36	30	19	37	36	32	24
1903	441	424	421	415	378	326	415	402	371	313	406	382	340	275	402	383	349	282	411	387	346	282
1904	74	62	61	60	59	54	62	62	62	62	59	55	50	40	56	49	43	29	59	55	49	41
1905	497	450	450	422	374	297	451	390	333	297	442	380	318	295	431	364	311	275	450	387	325	295
1906	43	35	34	34	33	33	34	34	33	33	32	31	26	26	29	27	12	10	35	35	33	33
1910	354	353	350	348	343	340	347	347	342	340	348	345	338	334	348	342	335	327	350	349	340	335
2007	416	378	378	374	341	298	378	353	324	278	388	342	312	252	378	338	305	244	378	354	327	273
2008	52	52	52	52	52	52	49	47	42	35	47	45	41	32	48	46	41	33	47	47	42	34
2202	36	35	35	35	35	35	32	32	32	32	20	20	20	20	35	35	35	35	25	25	24	24
2203	5	4	4	4	4	4	4	4	4	4	3	3	3	3	4	4	4	4	3	3	3	3
2304	70	69	67	67	67	67	67	67	67	67	66	66	66	66	64	64	61	60	66	66	66	66
2305	123	122	103	102	80	78	103	102	89	78	97	97	81	71	106	105	86	84	99	99	76	69
2306	77	73	64	62	43	39	64	62	51	39	61	61	48	35	62	61	41	38	59	56	43	35
2408	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
2409	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
2410	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
2411	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
2412	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
2413	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
2514	48	48	47	47	47	47	48	47	41	41	46	46	32	26	48	47	40	40	47	47	36	31
2515	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	85	85	86	86	86	86
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	42	42	42	42	41	38	42	42	40	36	42	42	39	36	41	41	34	33	42	42	39	38
2518	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91
2519	63	63	63	63	62	54	63	63	59	52	63	63	58	51	63	63	53	51	63	63	53	52
2620	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	5	5	5	5
2621	11	11	11	11	11	11	11	11	11	11	11	11	11	11	8	6	6	6	11	11	11	11
2722	54	54	53	53	53	53	53	53	53	53	53	53	52	52	53	53	52	52	53	53	53	52
2823	292	292	241	240	239	238	241	240	239	236	194	194	194	194	190	186	186	180	194	194	194	194
2824	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	13	13	7	16	16	16	16
2825	35	35	35	35	35	35	35	35	35	35	35	35	35	35	36	36	35	35	35	35	35	35
2926	288	288	288	286	266	251	270	268	221	193	238	238	194	186	278	276	246	179	229	219	193	186
2927	236	236	235	223	217	204	234	230	217	203	192	188	119	104	236	232	211	200	197	188	128	107
3001	176	164	164	164	167	166	164	164	161	160	132	128	126	123	137	137	135	131	145	145	145	141

Table L-39 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability (Number of Animals) Due to Vegetative Changes (a "-" means that geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3002	68	60	60	60	60	60	60	60	59	59	58	58	57	56	58	58	58	56	60	60	60	60
3003	99	96	84	84	81	80	82	82	77	77	70	67	66	64	74	74	74	69	76	76	76	72
3104	139	125	125	125	125	125	125	125	125	124	106	101	97	94	114	113	113	110	112	110	108	101
3105	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
3206	63	63	63	63	63	63	63	63	63	63	63	63	63	63	53	53	53	53	63	63	63	63
3207	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3308	236	203	203	195	177	141	197	192	173	139	168	163	153	124	196	184	157	118	183	167	154	124
3309	74	74	73	71	70	58	70	68	66	58	64	60	58	58	74	71	69	57	60	60	59	58
3310	109	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
3311	92	91	91	91	91	91	78	78	76	75	75	72	67	67	67	66	64	62	72	72	68	67
3312	54	54	48	48	46	45	47	47	46	45	44	43	43	42	42	42	41	40	43	43	43	42
3313	140	123	97	97	81	80	97	97	81	80	78	78	76	71	89	84	71	64	90	84	77	71
3314	90	88	82	82	79	78	81	81	79	78	68	66	65	64	64	64	64	61	67	67	67	65
3315	93	88	69	67	62	61	66	66	61	61	68	67	61	59	64	62	52	49	70	65	62	60
3416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3417	3	3	3	3	3	3	3	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3
3418	28	28	28	28	28	28	28	28	28	28	19	19	19	19	28	28	28	28	28	28	28	28
3419	59	59	59	59	59	59	59	59	59	59	56	56	56	56	59	59	59	59	59	59	59	59
3420	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58	58
3421	63	63	61	61	61	61	63	63	63	63	60	60	60	60	63	63	63	63	63	63	63	63
3523	104	101	101	101	101	101	99	97	94	91	94	89	87	80	89	88	76	66	83	75	71	60
3524	25	25	24	24	19	17	24	23	19	17	24	23	17	13	25	24	19	17	19	19	17	13
3525	146	134	131	131	114	97	134	129	111	90	129	115	100	73	127	127	101	74	106	99	91	70
3526	78	71	71	71	68	65	71	71	64	59	60	59	55	49	64	62	52	43	58	49	44	35
3551	145	134	134	134	110	96	134	131	105	91	130	125	89	63	134	128	88	66	104	104	86	63
3627	66	62	55	53	49	39	54	53	48	39	48	47	44	37	55	52	46	38	51	47	44	37
3628	87	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
3629	171	166	166	166	165	148	162	157	154	137	153	148	145	144	165	158	152	118	123	123	114	111
3630	69	69	68	68	68	68	68	67	65	63	64	59	59	56	61	59	53	48	67	61	59	54
3731	66	64	56	56	53	53	55	55	53	53	52	51	46	45	48	48	40	38	58	57	56	55
3732	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
3733	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3734	117	117	117	117	117	117	117	117	117	117	117	117	117	117	104	104	104	104	117	117	117	117
3835	105	105	105	104	102	87	103	102	100	86	105	105	88	75	104	100	95	88	90	90	84	71
3836	139	139	139	139	139	136	139	138	138	134	139	139	110	89	136	126	116	96	118	118	107	87
3837	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Table L-39 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability (Number of Animals) Due to Vegetative Changes (a "-" means that geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4041	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4222	172	171	171	171	171	171	166	161	154	146	165	156	147	140	164	159	153	146	154	153	146	143
4252	27	27	27	27	27	27	27	24	20	17	25	21	17	14	25	21	19	14	21	21	18	16
4253	65	61	61	61	61	61	61	56	49	42	60	53	49	43	57	50	44	36	54	52	48	44
4256	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
4302	5	5	5	5	5	5	5	5	5	5	2	2	2	2	5	5	5	5	2	2	2	2
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
4408	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
4503	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
4504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4508	32	32	32	32	32	32	32	32	32	32	32	32	32	31	32	32	31	31	32	32	32	31
4607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5012	473	419	419	381	346	271	408	375	330	282	378	345	297	236	372	347	298	245	379	355	328	280
5013	212	211	207	202	193	186	210	208	192	184	206	206	183	171	196	192	139	104	205	202	183	172
5014	145	143	139	128	109	94	145	141	111	96	139	139	106	89	138	134	95	75	138	133	105	89
5015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	235	234	234	234	233	232	235	235	235	235	235	235	235	235	234	234	233	232	235	235	235	235
5017	467	467	467	467	467	467	466	466	443	382	465	465	439	368	460	458	426	346	467	467	467	467
5018	190	187	187	183	175	168	189	187	173	164	187	187	175	168	186	185	162	139	187	185	174	168

Table L-39 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability (Number of Animals) Due to Vegetative Changes (a "-" means that geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5130	379	377	372	372	343	328	370	370	346	324	361	361	338	309	360	360	327	288	363	361	337	309
5131	311	301	300	300	273	261	298	298	275	259	290	290	270	250	289	289	260	229	292	291	270	251
5132	172	159	159	159	140	128	159	159	139	123	156	156	138	121	158	158	139	121	158	156	138	121
5133	421	419	419	419	419	419	411	411	384	340	404	404	373	322	404	404	375	326	404	404	375	329
5134	410	396	396	396	377	359	396	396	380	346	396	396	380	340	388	388	367	323	395	395	377	341
5135	223	223	212	212	199	188	209	209	197	184	205	205	195	180	209	209	200	188	207	205	195	180
5136	184	174	178	178	146	117	176	176	149	117	171	170	148	111	169	169	144	112	175	170	148	111
5137	179	179	179	179	178	178	178	178	177	177	178	178	176	176	179	179	178	178	178	178	176	176
5138	204	195	195	195	166	151	195	195	181	134	195	195	176	129	195	195	177	130	195	195	177	130

Table L-40

Estimated Changes in Vancouver Canada Goose Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means geese are not present in that WAA or soils and plant association data was not available for that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	98	98	98	98	96	98	98	98	97	98	98	98	96	98	98	98	97	98	98	98	97
303	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	96	96	94	91	73	96	93	91	72	94	92	91	70	93	88	87	64	94	92	91	70
406	95	95	95	93	77	95	93	90	72	94	92	91	68	93	90	88	64	95	92	90	68
407	99	99	99	98	95	99	99	98	76	99	99	99	69	99	99	97	72	99	99	99	69
408	97	97	97	97	90	97	97	97	90	97	97	97	90	97	97	97	85	97	97	97	90
509	98	94	93	91	79	96	96	93	80	96	95	93	75	94	92	91	77	96	94	93	74
510	90	89	84	81	71	88	87	82	68	88	83	82	61	85	80	78	59	90	84	82	64
511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
612	100	100	100	97	81	100	100	95	80	100	100	94	74	100	100	100	76	100	100	97	75
613	99	99	99	99	97	99	99	99	97	99	99	93	73	99	99	99	93	99	99	95	73
614	100	100	100	95	82	100	100	95	82	100	100	84	58	100	100	100	82	100	100	87	61
715	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
717	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
719	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
821	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
822	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
823	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	97	96	81	76	100	100	93	90	99	99	87	84
901	98	97	97	76	74	98	98	76	72	98	95	67	61	98	93	71	58	98	95	73	69
902	100	100	100	99	99	100	100	99	99	99	99	98	97	99	99	98	96	100	100	100	100
1003	76	54	53	44	42	56	56	43	42	53	48	39	35	53	38	27	23	74	56	38	35
1105	100	100	100	95	82	100	100	98	97	100	100	86	66	100	100	89	57	100	100	82	65
1106	100	100	100	94	94	100	100	81	75	100	94	81	75	100	100	69	63	100	100	100	100
1107	98	98	98	93	91	98	98	90	86	98	93	76	71	97	91	75	72	98	96	86	82
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	99	93	92	100	99	94	93	100	97	84	79	98	94	77	72	100	99	93	92
1210	100	99	97	87	86	99	97	85	81	100	96	80	75	98	94	68	60	100	96	80	75
1211	99	99	99	88	65	99	99	85	63	99	99	84	60	99	96	79	51	99	99	85	60
1212	100	100	98	94	94	100	98	94	94	100	99	86	83	99	99	98	98	100	97	88	88

Table L-40 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1213	100	98	95	89	86	99	96	92	88	98	91	74	68	96	93	85	81	96	89	73	68
1214	94	93	91	82	73	93	91	82	73	94	87	66	59	92	85	65	57	94	86	66	59
1315	80	80	80	63	59	80	80	63	58	80	78	58	54	80	80	56	51	80	79	59	54
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	80	80	80	80	80	80	80	80	80	80	80	79	70	80	80	79	72	80	80	78	70
1318	98	98	95	76	71	98	98	75	70	98	93	79	67	95	93	82	68	96	93	73	66
1319	89	89	89	76	67	89	86	69	61	87	80	63	52	89	89	71	63	86	82	68	58
1323	99	97	95	86	84	98	97	86	84	96	94	87	80	95	94	86	76	95	93	84	80
1332	93	93	93	90	87	93	93	88	83	93	93	82	74	93	92	83	76	93	93	79	74
1420	71	71	71	59	50	71	71	59	50	71	71	55	45	71	71	53	43	71	71	56	46
1421	86	86	85	69	64	86	84	62	55	86	81	57	50	86	80	51	43	86	84	61	54
1422	79	79	79	75	69	79	72	63	55	74	70	62	53	78	73	51	42	79	79	58	49
1524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1525	71	46	43	39	37	46	46	39	37	41	38	34	31	41	38	30	26	61	40	35	31
1526	97	97	97	97	97	96	95	92	91	96	94	91	89	94	92	88	86	95	93	90	89
1527	88	88	88	77	68	88	88	76	65	88	83	71	53	88	80	64	49	83	82	75	59
1528	95	93	92	91	88	92	91	88	84	87	84	77	72	88	85	77	71	87	85	80	75
1529	82	82	79	72	64	79	76	66	54	79	74	61	49	82	76	60	48	73	70	60	48
1530	82	82	82	70	58	82	84	69	57	82	82	72	56	82	78	62	47	81	80	72	56
1531	78	78	76	63	57	78	77	64	57	77	70	57	49	69	57	32	22	78	78	60	52
1601	100	95	95	78	66	95	95	78	66	96	96	74	56	94	94	77	64	97	95	78	56
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	98	98	86	77	99	99	90	80
1603	98	95	95	91	88	95	95	91	84	95	93	88	79	95	93	88	81	95	95	91	84
1604	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1605	92	92	92	92	87	92	92	88	72	92	92	88	70	92	92	88	74	92	92	90	72
1706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1707	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	97	89	84	77	96	94	84	72	100	100	85	56	99	99	89	67	100	100	89	59
1811	100	96	92	89	85	96	96	90	85	99	99	90	76	98	98	93	82	99	99	94	83
1812	99	99	99	97	95	99	99	98	96	99	99	95	90	99	99	97	93	98	98	96	91
1813	93	93	93	93	93	93	93	93	93	93	93	91	88	93	93	93	93	93	93	91	89
1814	99	97	97	92	90	98	96	93	90	99	98	94	89	98	98	93	87	96	96	94	89
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	94	89	83	77	97	96	90	77	96	95	88	75	95	93	86	72	95	94	88	77

Table L-40 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1817	100	100	100	96	85	100	100	96	85	100	100	89	63	100	100	100	83	100	100	90	67
1901	98	93	90	80	75	89	88	79	74	91	85	73	65	91	81	71	60	94	91	75	65
1902	97	97	89	78	70	97	97	92	70	97	97	86	65	97	97	81	51	100	97	86	65
1903	96	95	94	86	74	94	91	84	71	92	87	77	62	91	87	79	64	93	88	78	64
1904	84	82	81	80	73	84	84	84	84	80	74	68	54	76	66	58	39	80	74	66	55
1905	91	91	85	75	60	91	78	67	60	89	76	64	59	87	73	63	55	91	78	65	59
1906	81	79	79	77	77	79	79	77	77	74	72	60	60	67	63	28	23	81	81	77	77
1910	100	99	98	97	96	98	98	97	96	98	97	95	94	98	97	95	92	99	99	96	95
2007	91	91	90	82	72	91	85	78	67	93	82	75	61	91	81	73	59	91	85	79	66
2008	100	100	100	100	100	94	90	81	67	90	87	79	62	92	88	79	63	90	90	81	65
2202	97	97	97	97	97	89	89	89	89	56	56	56	56	97	97	97	97	69	69	67	67
2203	80	80	80	80	80	80	80	80	80	60	60	60	60	80	80	80	80	60	60	60	60
2304	99	96	96	96	96	96	96	96	96	94	94	94	94	91	91	87	86	94	94	94	94
2305	99	84	83	65	63	84	83	72	63	79	79	66	58	86	85	70	68	80	80	62	56
2306	95	83	81	56	51	83	81	66	51	79	79	62	45	81	79	53	49	77	73	56	45
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	100	98	98	98	98	100	98	85	85	96	96	67	54	100	98	83	83	98	98	75	65
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	99	99	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	98	90	100	100	95	86	100	100	93	86	98	98	81	79	100	100	93	90
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	98	86	100	100	94	83	100	100	92	81	100	100	84	81	100	100	84	83
2620	100	100	100	100	100	100	100	100	100	100	100	100	100	100	80	80	80	100	100	100	100
2621	100	100	100	100	100	100	100	100	100	100	100	100	100	73	55	55	55	100	100	100	100
2722	100	98	98	98	98	98	98	98	98	98	98	96	96	98	98	96	96	98	98	98	96
2823	100	83	82	82	82	83	82	82	81	66	66	66	66	65	64	64	62	66	66	66	66
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	81	81	44	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	103	103	100	100	100	100	100	100
2926	100	100	99	92	87	94	93	77	67	83	83	67	65	97	96	85	62	80	76	67	65
2927	100	100	94	92	86	99	97	92	86	81	80	50	44	100	98	89	85	83	80	54	45
3001	93	93	93	95	94	93	93	91	91	75	73	72	70	78	78	77	74	82	82	82	80

Table L-40 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3002	88	88	88	88	88	88	88	87	87	85	85	84	82	85	85	85	82	88	88	88	88
3003	97	85	85	82	81	83	83	78	78	71	68	67	65	75	75	75	70	77	77	77	73
3104	90	90	90	90	90	90	90	90	89	76	73	70	68	82	81	81	79	81	79	78	73
3105	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3206	100	100	100	100	100	100	100	100	100	100	100	100	100	84	84	84	84	100	100	100	100
3207	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3308	86	86	83	75	60	83	81	73	59	71	69	65	53	83	78	67	50	78	71	65	53
3309	100	99	96	95	78	95	92	89	78	86	81	78	78	100	96	93	77	81	81	80	78
3310	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98	98
3311	99	99	99	99	99	85	85	83	82	82	78	73	73	73	72	70	67	78	78	74	73
3312	100	89	89	85	83	87	87	85	83	81	80	80	78	78	78	76	74	80	80	80	78
3313	88	69	69	58	57	69	69	58	57	56	56	54	51	64	60	51	46	64	60	55	51
3314	98	91	91	88	87	90	90	88	87	76	73	72	71	71	71	71	68	74	74	74	72
3315	95	74	72	67	66	71	71	66	66	73	72	66	63	69	67	56	53	75	70	67	65
3416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3417	100	100	100	100	100	100	100	100	100	67	67	67	67	100	100	100	100	100	100	100	100
3418	100	100	100	100	100	100	100	100	100	68	68	68	68	100	100	100	100	100	100	100	100
3419	100	100	100	100	100	100	100	100	100	95	95	95	95	100	100	100	100	100	100	100	100
3420	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3421	100	97	97	97	97	100	100	100	100	95	95	95	95	100	100	100	100	100	100	100	100
3523	97	97	97	97	97	95	93	90	88	90	86	84	77	86	85	73	63	80	72	68	58
3524	100	96	96	76	68	96	92	76	68	96	92	68	52	100	96	76	68	76	76	68	52
3525	92	90	90	78	66	92	88	76	62	88	79	68	50	87	87	69	51	73	68	62	48
3526	91	91	91	87	83	91	91	82	76	77	76	71	63	82	79	67	55	74	63	56	45
3551	92	92	92	76	66	92	90	72	63	90	86	61	43	92	88	61	46	72	72	59	43
3627	94	83	80	74	59	82	80	73	59	73	71	67	56	83	79	70	58	77	71	67	56
3628	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99
3629	97	97	97	96	87	95	92	90	80	89	87	85	84	96	92	89	69	72	72	67	65
3630	100	99	99	99	99	99	97	94	91	93	86	86	81	88	86	77	70	97	88	86	78
3731	97	85	85	80	80	83	83	80	80	79	77	70	68	73	73	61	58	88	86	85	83
3732	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
3733	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3734	100	100	100	100	100	100	100	100	100	100	100	100	100	89	89	89	89	100	100	100	100
3835	100	100	99	97	83	98	97	95	82	100	100	84	71	99	95	90	84	86	86	80	68
3836	100	100	100	100	98	100	99	99	96	100	100	79	64	98	91	83	69	85	85	77	63
3837	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table L-40 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4041	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4222	99	99	99	99	99	97	94	90	85	96	91	85	81	95	92	89	85	90	89	85	83
4252	100	100	100	100	100	100	89	74	63	93	78	63	52	93	78	70	52	78	78	67	59
4253	94	94	94	94	94	94	86	75	65	92	82	75	66	88	77	68	55	83	80	74	68
4256	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4302	100	100	100	100	100	100	100	100	100	40	40	40	40	100	100	100	100	40	40	40	40
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4508	100	100	100	100	100	100	100	100	100	100	100	100	97	100	100	97	97	100	100	100	97
4607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5012	89	89	81	73	57	86	79	70	60	80	73	63	50	79	73	63	52	80	75	69	59
5013	100	98	95	91	88	99	98	91	87	97	97	86	81	92	91	66	49	97	95	86	81
5014	99	96	88	75	65	100	97	77	66	96	96	73	61	95	92	66	52	95	92	72	61
5015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	100	100	100	99	99	100	100	100	100	100	100	100	100	100	100	99	99	100	100	100	100
5017	100	100	100	100	100	100	100	95	82	100	100	94	79	99	98	91	74	100	100	100	100
5018	98	98	96	92	88	99	98	91	86	98	98	92	88	98	97	85	73	98	97	92	88

Table L-40 (continued)

Estimated Changes in Vancouver Canada Goose Habitat Capability Due to Vegetative Changes, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means geese are not present in that WAA or soils and plant association data were not available for that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5130	99	98	98	91	87	98	98	91	85	95	95	89	82	95	95	86	76	96	95	89	82
5131	97	96	96	88	84	96	96	88	83	93	93	87	80	93	93	84	74	94	94	87	81
5132	92	92	92	81	74	92	92	81	72	91	91	80	70	92	92	81	70	92	91	80	70
5133	100	100	100	100	100	98	98	91	81	96	96	89	76	96	96	89	77	96	96	89	78
5134	97	97	97	92	88	97	97	93	84	97	97	93	83	95	95	90	79	96	96	92	83
5135	100	95	95	89	84	94	94	88	83	92	92	87	81	94	94	90	84	93	92	87	81
5136	95	97	97	79	64	96	96	81	64	93	92	80	60	92	92	78	61	95	92	80	60
5137	100	100	100	99	99	99	99	99	99	99	99	98	98	100	100	99	99	99	99	98	98
5138	96	96	96	81	74	96	96	89	66	96	96	86	63	96	96	87	64	96	96	87	64

Table L-41
Acres of State and Private Lands in Each WAA, with Past and Estimated Future Timber Harvesting

WAA#	State & Private Acres	Total Productive Forested Acres	Acres Harvested as of 1990	Percent of Forested Acres Harvested	Year of Future Harvest	Future Harvest Acres
101	22,690	21,974	8,407	38		
202	87,104	83,620	0	0		
303	60	55	0	0		
404	0	0	0	0		
405	180	171	171	100		
406	2,798	2,406	2,406	100		
407	24,144	20,764	19,764	95	1993	1,000
408	18,668	14,188	14,188	100		
509	5,661	5,264	5,264	100		
510	360	328	0	0		
511	0	0	0	0		
612	180	171	171	100		
613	820	779	779	100		
614	7,193	6,833	2,980	44		
715	0	0	0	0		
716	500	270	0	0		
717	80	50	0	0		
718	0	0	0	0		
719	0	0	0	0		
820	180	94	0	0		
821	0	0	0	0		
822	480	355	0	0		
823	20	18	0	0		
824	40	28	28	100		
825	140	38	38	100		
826	1,420	469	139	30		
901	837	812	0	0		
902	1,337	1,297	0	0		
1003	20	19	0	0		
1105	59,650	52,492	7,422	14	2020	20,150
1106	23,954	22,517	22,517	100		
1107	62,289	52,946	52,946	100		
1108	0	0	0	0		
1209	478	435	0	0		
1210	2,464	2,168	1,893	87	1997	275
1211	16,732	14,891	14,891	100		
1212	160	142	142	100		
1213	320	285	285	100		
1214	21,702	19,749	19,749	100		
1315	24,705	19,517	12,043	62		
1316	1,119	962	17	2		
1317	8,752	7,964	4,884	61		
1318	64,403	52,810	52,810	100		
1319	0	0	0	0		
1323	2,187	1,793	1,793	100		
1332	16,369	15,223	13,489	89		
1420	2,659	2,499	40	2		
1421	1,219	1,121	0	0		
1422	3,373	3,137	0	0		
1524	0	0	0	0		
1525	6,540	6,278	64	1		

Table L-41 (continued)
Acres of State and Private Lands in Each WAA, with Past and Estimated Future Timber Harvesting

WAA#	State & Private Acres	Total Productive Forested Acres	Acres Harvested as of 1990	Percent of Forested Acres Harvested	Year of Future Harvest	Future Harvest Acres
1526	381	343	343	100		
1527	2,148	2,019	2,019	100		
1528	59	54	0	0		
1529	1,720	1,634	668	41		
1530	2,125	2,019	40	2		
1531	663	636	0	0		
1817	319	303	303	100		
5015	0	0	0	0		
Ketchi-kan	501,402	443,940	262,693	59		21,425
1601	20	19	0	0		
1602	1,288	515	0	0		
1603	0	0	0	0		
1604	0	0	0	0		
1605	3,517	1,301	0	0		
1706	0	0	0	0		
1707	1,603	705	0	0		
1708	140	38	0	0		
1809	0	0	0	0		
1810	3,921	2,705	0	0		
1811	0	0	0	0		
1812	680	415	0	0		
1813	921	350	0	0		
1814	0	0	0	0		
1815	0	0	0	0		
1816	0	0	0	0		
1901	540	491	0	0		
1902	0	0	0	0		
1903	15,365	14,904	9,102	61		
1904	0	0	0	0		
1905	0	0	0	0		
1906	0	0	0	0		
1910	0	0	0	0		
2007	19,484	18,315	13,422	73		
2008	20	19	0	0		
5012	4,509	4,284	3,852	90		
5013	40	37	0	0		
5014	0	0	0	0		
5016	160	152	0	0		
5017	20	19	0	0		
5018	0	0	0	0		
5130	540	518	0	0		
5131	40	37	0	0		
5132	48,311	45,895	45,345	99	1996	550
5133	0	0	0	0		
5134	0	0	0	0		
5135	0	0	0	0		
5136	600	552	552	100		
5137	580	534	0	0		
5138	9,138	8,771	3,774	43		
Stikine	111,437	100,576	76,047	76		550

Table L-41 (continued)
Acres of State and Private Lands in Each WAA, with Past and Estimated Future Timber Harvesting

WAA#	State & Private Acres	Total Productive Forested Acres	Acres Harvested as of 1990	Percent of Forested Acres Harvested	Year of Future Harvest	Future Harvest Acres
2202	1,121	348	0	0		
2203	0	0	0	0		
2300				0		
2304	4,117	2,347	0	0		
2305	80	35	0	0		
2306	3,282	1,411	0	0		
2408	801	553	0	0		
2409	961	663	663	100		
2410	0	0	0	0		
2411	0	0	0	0		
2412	0	0	0	0		
2413	0	0	0	0		
2514	8,310	5,567	3,708	67		
2515	15,796	6,002	5,217	87		
2516	0	0	0	0		
2517	25,415	6,100	6,100	100		
2518	2,582	671	0	0		
2519	0	0	0	0		
2620	160	152	0	0		
2621	1,604	1,556	0	0		
2722	19,108	16,623	5,000	30		
2823	656	224	0	0		
2824	0	0	0	0		
2825	100	19	0	0		
2926	24,520	19,616	19,616	100		
2927	2,724	1,743	1,743	100		
3001	0	0	0	0		
3002	13,641	5,184	4,655	90		
3003	5,429	3,583	0	0		
3104	0	0	0	0		
3105	0	0	0	0		
3206	3,739	2,356	0	0		
3207	0	0	0	0		
3308	80	66	66	100		
3309	0	0	0	0		
3310	0	0	0	0		
3311	20	15	0	0		
3312	0	0	0	0		
3313	220	187	0	0		
3314	0	0	0	0		
3315	0	0	0	0		
3416	0	0	0	0		
3417	825	495	0	0		
3418	1,280	934	934	100		
3419	1,882	960	960	100		
3420	20	10	0	0		
3421	200	120	120	100		
3523	6,764	4,735	4,665	99		
3524	24,949	15,718	15,718	100		
3525	440	334	334	100		
3526	4,120	2,884	2,884	100		
3551	320	250	250	100		
3627	0	0	0	0		

Table L-41 (continued)
Acres of State and Private Lands in Each WAA, with Past and Estimated Future Timber Harvesting

WAA#	State & Private Acres	Total Productive Forested Acres	Acres Harvested as of 1990	Percent of Forested Acres Harvested	Year of Future Harvest	Future Harvest Acres
3628	120	106	0	0		
3629	0	0	0	0		
3630	0	0	0	0		
3731	1,940	854	0	0		
3732	40	13	0	0		
3733	0	0	0	0		
3734	516	279	279	100		
3835	900	819	0	0		
3836	501	426	0	0		
3837	420	307	0	0		
3938	20	18	0	0		
3939	20	17	0	0		
3940	40	35	0	0		
4041	180	166	0	0		
4042	8,237	7,660	7,660	100		
4043	0	0	0	0		
4044	22,305	15,614	4,614	30	2001	11,000
4054	0	0	0	0		
4055	699	594	594	100		
4145	140	125	0	0		
4146	0	0	0	0		
4147	638	453	0	0		
4148	0	0	0	0		
4149	0	0	0	0		
4150	1,037	975	0	0		
4222	160	115	0	0		
4252	29,519	20,958	20,958	100		
4253	60	34	0	0		
4256	60	57	0	0		
4302	0	0	0	0		
4304	499	499	499	100		
4407	0	0	0	0		
4408	0	0	0	0		
4503	185	54	0	0		
4504	3,069	2,547	2,547	100		
4505	0	0	0	0		
4506	0	0	0	0		
4508	27,366	16,146	16,146	100		
4607	0	0	0	0		
Chatham	273,937	170,332	125,930	74		11,000
Unknown	364	47	0	0		
Total	886,776	714,848	464,670			32,975

Table L-42

Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	7	7	7	7	7	7	7	7	7	7	7	7	7	6	7	7	7	7	7	7	7	7
303	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
404	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
405	8	8	8	7	7	6	8	7	7	6	7	7	7	6	7	7	7	6	7	7	7	6
406	12	11	11	11	11	8	11	11	11	8	11	11	11	7	11	11	10	6	11	11	11	7
407	5	5	5	5	5	4	5	4	4	3	5	5	4	3	4	4	4	3	5	5	4	3
408	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
509	6	6	6	6	6	5	6	6	6	5	6	6	6	4	6	6	6	5	6	6	6	4
510	13	10	10	9	9	7	10	10	9	7	10	10	9	6	9	9	8	6	10	10	9	7
511	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
612	11	10	10	10	10	7	10	10	10	7	10	10	9	6	10	10	10	6	10	10	10	6
613	6	6	6	6	6	6	6	6	6	6	6	6	5	4	6	6	6	5	6	6	6	4
614	2	2	2	2	2	2	2	2	2	2	2	2	1	1	2	2	2	2	2	2	1	1
715	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
716	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
717	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
718	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
719	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
820	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
821	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
822	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
823	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
824	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
825	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
826	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
901	8	8	8	8	6	5	8	8	5	5	8	8	5	4	8	8	5	4	8	8	5	5
902	22	22	22	22	22	21	22	22	22	21	22	22	21	21	22	22	21	21	22	22	22	22
1003	12	10	7	7	6	4	7	7	6	4	7	6	6	3	7	5	4	2	10	8	6	3
1105	21	21	21	21	18	16	21	21	20	20	21	20	15	11	20	19	16	11	21	20	15	12
1106	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
1107	25	25	25	25	22	22	25	24	21	20	25	22	16	15	24	22	16	15	25	24	20	19
1108	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
1209	14	14	14	14	13	12	14	14	13	13	14	14	11	9	14	13	9	8	14	14	13	12
1210	10	10	10	10	9	8	10	10	8	8	10	10	8	7	10	9	6	5	10	10	8	7
1211	8	8	7	7	6	4	7	7	6	4	7	7	6	4	7	6	5	3	8	7	6	4
1212	5	5	5	5	4	4	5	5	4	4	5	5	4	3	5	5	5	5	5	5	4	4
1213	5	5	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	4	4	3	3

Table L-42 continued

Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1214	8	7	7	7	6	5	7	7	6	5	8	6	4	4	7	6	4	3	7	6	5	4
1315	14	10	10	9	7	5	10	9	7	5	10	9	6	5	10	9	6	4	10	9	6	5
1316	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1317	7	5	5	5	5	4	5	5	4	4	5	4	4	3	4	4	3	3	4	4	3	3
1318	7	7	7	7	5	4	7	7	5	4	7	7	5	3	7	7	5	4	7	7	4	3
1319	14	12	12	11	9	8	12	11	8	7	11	10	7	5	12	11	8	7	11	10	8	6
1323	7	7	7	6	6	5	7	7	6	5	6	6	6	5	6	6	5	5	6	6	5	5
1332	11	10	10	10	9	8	10	10	8	8	10	10	8	6	10	10	8	7	10	10	7	6
1420	7	4	4	4	2	2	4	3	2	2	4	3	2	2	4	4	2	1	4	3	2	2
1421	14	12	13	11	9	7	13	11	8	6	12	10	7	5	12	10	6	4	12	11	8	6
1422	21	17	16	14	12	10	16	13	12	9	14	12	11	8	15	13	9	6	17	15	11	7
1524	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1525	12	8	6	5	5	3	6	6	5	3	5	5	4	3	5	5	4	2	7	5	5	3
1526	11	10	10	10	10	10	10	10	10	9	10	10	9	9	10	10	9	9	10	10	9	9
1527	7	6	6	5	5	4	6	6	5	4	6	5	4	3	6	5	4	3	5	5	5	3
1528	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1	2	2	2	1
1529	12	10	8	8	7	6	8	8	7	5	8	7	7	5	9	8	7	5	8	7	6	5
1530	10	7	7	7	6	4	7	7	6	4	7	7	6	4	7	7	5	3	7	7	6	4
1531	11	9	7	7	6	5	7	6	6	5	6	6	5	4	5	4	3	2	7	6	5	4
1601	6	6	5	5	4	4	5	5	4	4	5	5	4	3	5	5	4	4	5	5	4	3
1602	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	3	3
1603	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	2	3	3	3	2
1604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1605	6	5	5	5	5	5	5	5	5	4	5	5	5	4	5	5	5	4	5	5	5	4
1706	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1707	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1708	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
1809	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1810	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	2	3	3	3	2
1811	4	4	4	3	3	3	4	4	3	3	4	4	3	3	4	4	3	3	4	4	3	3
1812	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1813	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1814	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1815	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1816	3	3	3	3	2	2	3	3	3	2	3	3	3	2	3	3	3	2	3	3	3	2
1817	8	8	8	8	7	6	8	8	7	6	8	8	7	4	8	8	8	6	8	8	7	4
1901	15	14	13	13	11	10	12	12	11	10	13	11	10	9	12	11	9	8	13	13	10	9

Table L-42 continued

Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1902	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1
1903	12	11	11	11	10	8	11	11	9	8	11	10	9	7	11	10	9	6	11	10	9	7
1904	3	3	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	1	2	2	2	2
1905	14	12	12	11	10	7	12	10	9	7	12	10	8	7	11	9	8	7	12	10	8	7
1906	3	3	2	2	2	2	3	3	2	2	3	2	2	2	2	2	1	1	3	3	3	2
1910	14	14	14	14	14	13	14	14	14	13	14	14	13	13	14	14	13	13	14	14	13	13
2007	14	12	11	11	10	8	11	10	9	8	11	9	8	7	11	9	8	7	11	10	9	8
2008	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2202	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2203	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2304	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2305	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2306	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2408	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2409	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2410	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2411	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2412	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2413	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2514	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2515	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2516	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2517	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2518	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2519	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2620	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2621	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2722	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2823	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
2824	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2825	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2926	4	4	4	4	4	4	4	4	3	3	4	4	3	3	4	4	4	3	4	4	3	3
2927	4	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	3	4	4	3	3
3001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-42 continued

Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3309	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3310	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3311	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3313	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3417	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3523	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3524	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3526	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3551	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3627	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3628	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3629	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3732	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3733	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3734	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3836	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3837	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3938	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3939	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3940	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4041	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table L-42 continued

Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
4042	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4043	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4054	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4252	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4304	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4407	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4408	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4503	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
4504	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4505	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
4506	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
4508	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
4607	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
5012	23	20	20	18	16	12	19	17	15	12	17	16	14	10	17	16	14	10	17	16	15	12
5013	9	9	9	8	8	8	9	9	8	7	9	9	7	7	9	8	5	4	9	9	7	7
5014	9	8	8	7	6	5	8	8	6	5	8	8	5	5	7	7	5	4	7	7	5	5
5015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5016	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
5017	27	27	27	27	27	27	27	27	25	22	27	27	25	22	26	26	24	20	27	27	27	27
5018	6	6	6	6	5	5	6	6	6	5	6	6	5	5	6	6	5	4	6	6	5	5
5130	12	12	11	11	10	10	11	11	10	10	11	11	10	9	11	11	10	8	11	11	10	9
5131	8	7	7	7	7	6	7	7	7	6	7	7	7	6	7	7	6	5	7	7	7	6
5132	5	4	4	4	3	3	4	4	3	3	4	4	3	3	4	4	3	3	4	4	3	3
5133	8	8	8	8	8	8	8	8	8	6	8	8	7	5	8	8	7	6	8	8	7	6
5134	14	14	13	13	12	11	13	13	12	11	13	13	12	11	13	13	12	10	13	13	12	11

Table L-42 continued

Estimated Changes in Gray Wolf Habitat Capability (Number of Animals)

WAA#	1954	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5135	4	4	4	4	4	3	4	4	4	3	4	4	4	3	4	4	4	3	4	4	4	3
5136	5	5	5	5	4	3	5	5	4	3	5	4	4	3	5	5	4	3	5	4	4	3
5137	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5138	7	6	6	6	5	4	6	6	5	4	6	6	5	4	6	6	5	4	6	6	5	4

Table L-43

Estimated Changes in Gray Wolf Habitat Capability, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means wolves are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
101	100	100	100	100	100	100	100	100	100	100	100	100	86	100	100	100	100	100	100	100	100
303	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88	88
404	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
405	100	100	88	88	75	100	88	88	75	88	88	88	75	88	88	88	75	88	88	88	75
406	92	92	92	92	67	92	92	92	67	92	92	92	58	92	92	83	50	92	92	92	58
407	100	100	100	100	80	100	80	80	60	100	100	80	60	80	80	80	60	100	100	80	60
408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
509	100	100	100	100	83	100	100	100	83	100	100	100	67	100	100	100	83	100	100	100	67
510	77	77	69	69	54	77	77	69	54	77	77	69	46	69	69	62	46	77	77	69	54
511	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
612	91	91	91	91	64	91	91	91	64	91	91	82	55	91	91	91	55	91	91	91	55
613	100	100	100	100	100	100	100	100	100	100	100	83	67	100	100	100	83	100	100	100	67
614	100	100	100	100	100	100	100	100	100	100	100	50	50	100	100	100	100	100	100	50	50
715	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
716	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
717	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
718	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
719	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
820	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
821	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
822	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
826	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
901	100	100	100	75	63	100	100	63	63	100	100	63	50	100	100	63	50	100	100	63	63
902	100	100	100	100	95	100	100	100	95	100	100	95	95	100	100	95	95	100	100	100	100
1003	83	58	58	50	33	58	58	50	33	58	50	50	25	58	42	33	17	83	67	50	25
1105	100	100	100	86	76	100	100	95	95	100	95	71	52	95	90	76	52	100	95	71	57
1106	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100
1107	100	100	100	88	88	100	96	84	80	100	88	64	60	96	88	64	60	100	96	80	76
1108	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1209	100	100	100	93	86	100	100	93	93	100	100	79	64	100	93	64	57	100	100	93	86
1210	100	100	100	90	80	100	100	80	80	100	100	80	70	100	90	60	50	100	100	80	70
1211	100	88	88	75	50	88	88	75	50	88	88	75	50	88	75	63	38	100	88	75	50
1212	100	100	100	80	80	100	100	80	80	100	100	80	60	100	100	100	100	100	100	80	80

Table L-43 continued

Estimated Changes in Gray Wolf Habitat Capability, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means wolves are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1213	92	80	80	80	80	80	80	80	80	80	80	60	60	80	80	80	80	80	80	60	60
1214	88	88	88	75	63	88	88	75	63	100	75	50	50	88	75	50	38	88	75	63	50
1315	71	71	64	50	36	71	64	50	36	71	64	43	36	71	64	43	29	71	64	43	36
1316	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1317	71	71	71	71	57	71	71	57	57	71	57	57	43	57	57	43	43	57	57	43	43
1318	100	100	100	71	57	100	100	71	57	100	100	71	43	100	100	71	57	100	100	57	43
1319	86	86	79	64	57	86	79	57	50	79	71	50	36	86	79	57	50	79	71	57	43
1323	100	100	86	86	71	100	100	86	71	86	86	86	71	86	86	71	71	86	86	71	71
1332	91	91	91	82	73	91	91	73	73	91	91	73	55	91	91	73	64	91	91	64	55
1420	57	57	57	29	29	57	43	29	29	57	43	29	29	57	57	29	14	57	43	29	29
1421	86	93	79	64	50	93	79	57	43	86	71	50	36	86	71	43	29	86	79	57	43
1422	81	76	67	57	48	76	62	57	43	67	57	52	38	71	62	43	29	81	71	52	33
1524	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1525	67	50	42	42	25	50	50	42	25	42	42	33	25	42	42	33	17	58	42	42	25
1526	91	91	91	91	91	91	91	91	82	91	91	82	82	91	91	82	82	91	91	82	82
1527	92	86	78	70	57	86	79	69	54	84	75	64	42	83	73	57	37	74	72	65	47
1528	100	100	100	100	100	100	100	100	100	100	100	100	50	100	100	100	50	100	100	100	50
1529	83	67	67	58	50	67	67	58	42	67	58	58	42	75	67	58	42	67	58	50	42
1530	70	70	70	60	40	70	70	60	40	70	70	60	40	70	70	50	30	70	70	60	40
1531	82	64	64	55	45	64	55	55	45	55	55	45	36	45	36	27	18	64	55	45	36
1601	100	83	83	67	67	83	83	67	67	83	83	67	50	83	83	67	67	83	83	67	50
1602	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	75	75	100	100	75	75
1603	100	100	100	100	100	100	100	100	100	100	100	100	67	100	100	100	67	100	100	100	67
1604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1605	83	83	83	83	83	83	83	83	67	83	83	83	67	83	83	83	67	83	83	83	67
1706	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1707	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1708	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1809	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1810	100	100	100	100	100	100	100	100	100	100	100	100	67	100	100	100	67	100	100	100	67
1811	100	100	75	75	75	100	100	75	75	100	100	75	75	100	100	75	75	100	100	75	75
1812	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1813	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
1814	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1815	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
1816	100	100	100	67	67	100	100	100	67	100	100	100	67	100	100	100	67	100	100	100	67

Table L-43 continued

Estimated Changes in Gray Wolf Habitat Capability, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means wolves are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
1817	100	100	100	88	75	100	100	88	75	100	100	88	50	100	100	100	75	100	100	88	50
1901	93	87	87	73	67	80	80	73	67	87	73	67	60	80	73	60	53	87	87	67	60
1902	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100	100
1903	92	92	92	83	67	92	92	75	67	92	83	75	58	92	83	75	50	92	83	75	58
1904	100	67	67	67	67	67	67	67	67	67	67	67	33	67	67	67	33	67	67	67	67
1905	86	86	79	71	50	86	71	64	50	86	71	57	50	79	64	57	50	86	71	57	50
1906	100	67	67	67	67	100	100	67	67	100	67	67	67	67	67	33	33	100	100	100	67
1910	100	100	100	100	93	100	100	100	93	100	100	93	93	100	100	93	93	100	100	93	93
2007	86	79	79	71	57	79	71	64	57	79	64	57	50	79	64	57	50	79	71	64	57
2008	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2202	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2203	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2304	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2305	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2306	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
2408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2409	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2411	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2412	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2413	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2514	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
2515	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2516	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2517	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2518	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2519	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2823	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2824	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2825	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2926	100	100	100	100	100	100	100	75	75	100	100	75	75	100	100	100	75	100	100	75	75
2927	100	100	100	100	100	100	100	100	100	100	100	75	75	100	100	100	75	100	100	75	75
3001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-43 continued

Estimated Changes in Gray Wolf Habitat Capability, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means wolves are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3311	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3313	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3314	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3416	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3418	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3421	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3525	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3627	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3731	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3732	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3733	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3734	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3836	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3837	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table L-43 continued

Estimated Changes in Gray Wolf Habitat Capability, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means wolves are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
3938	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4041	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4148	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4256	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4304	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4408	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4503	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4505	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4506	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4508	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4607	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5012	87	87	78	70	52	83	74	65	52	74	70	61	43	74	70	61	43	74	70	65	52
5013	100	100	89	89	89	100	100	89	78	100	100	78	78	100	89	56	44	100	100	78	78
5014	89	89	78	67	56	89	89	67	56	89	89	56	56	78	78	56	44	78	78	56	56
5015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5016	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5017	100	100	100	100	100	100	100	93	81	100	100	93	81	96	96	89	74	100	100	100	100
5018	100	100	100	83	83	100	100	100	83	100	100	83	83	100	100	83	67	100	100	83	83

Table L-43 continued

Estimated Changes in Gray Wolf Habitat Capability, Expressed in Percent of 1954 Habitat Capability (1954 = 100 Percent) (a "-" means wolves are not present in that WAA)

WAA#	1990	A-1	A-2	A-5	A-15	B-1	B-2	B-5	B-15	C-1	C-2	C-5	C-15	D-1	D-2	D-5	D-15	P-1	P-2	P-5	P-15
5130	100	92	92	83	83	92	92	83	83	92	92	83	75	92	92	83	67	92	92	83	75
5131	88	88	88	88	75	88	88	88	75	88	88	88	75	88	88	75	63	88	88	88	75
5132	80	80	80	60	60	80	80	60	60	80	80	60	60	80	80	60	60	80	80	60	60
5133	100	100	100	100	100	100	100	100	75	100	100	88	63	100	100	88	75	100	100	88	75
5134	100	93	93	86	79	93	93	86	79	93	93	86	79	93	93	86	71	93	93	86	79
5135	100	100	100	100	75	100	100	100	75	100	100	100	75	100	100	100	75	100	100	100	75
5136	100	100	100	80	60	100	100	80	60	100	80	80	60	100	100	80	60	100	80	80	60
5137	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5138	86	86	86	71	57	86	86	71	57	86	86	71	57	86	86	71	57	86	86	71	57

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